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Title of thesis

Gender Dynamics in Times of Crisis: A Critical Examination of Women's Representation
in Qatari Newspaper

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Lay Summary of Thesis

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This research aims to examine the portrayal of women in local print media in Qatar and to analyse gender representation in newspaper articles during crises, specifically during the political crisis (the Gulf-Qatar crisis) and the health crisis (COVID-19). Investigating media coverage in times of crisis allows for an assessment of how gender dynamics emerge in response efforts. This evaluation will assess the prominence and space allocated to different genders in the articles, specifically evaluating whether men are mentioned more frequently or receive more coverage compared to women, and vice versa.

This research is divided into six chapters, detailed as follows:

Chapter 1 Introduction: Analyses the role of print media, especially newspapers, in shaping public opinion and social norms. I also examine the role of governments in censorship and the regulation of the media, which limit the diversity of perspectives.

Moreover, the chapter investigates how the media portray gender by analysing how newspapers reinforce or challenge existing gender stereotypes. It also explores women and socioeconomic transformation in Qatar and the media landscape in Qatar, highlighting the government's influence on media content and how Qatari cultural values and social

norms play a role in the country's media production. Finally, the chapter examines gender representation in the media's coverage of crises, by illustrating how crises can disrupt traditional gender roles and shift power dynamics.

Chapter 2 Literature Review: This chapter investigates the literature on gender representation in print media, particularly focusing on how narratives about women are crafted in both Arab and Western contexts, as well as the impact of crises on these narratives. It also examines the theoretical framework concerning gender representation in print media during times of crisis, analyses through the lens of Nancy Fraser's theory of justice. Finally, the chapter highlights the significance of the current research and its potential to address gaps in gender and media studies, specifically regarding the portrayal of Arab women in local print media. This section is followed by a presentation of the research questions.

Chapter 3 Methodology: This chapter describes the data collection process from the Arabic newspaper Al Raya. It details the data analysis procedures, emphasizing the extraction of the most frequently discussed topics and the identification of the predominant gender (male or female) represented in each article. This analysis aims to monitor gender representation in the newspaper over time and reveal the impact of crises on how genders are portrayed in news coverage.

Chapter 4 Representation of Gender: an overview: This chapter offers an overview of gender representation in Qatari newspaper articles published between 2013 and 2021. It highlights the most frequently discussed topics, and the counts of articles categorised by dominant gender characters (male or female), across different years and topics.

Chapter 5 Representation of Gender in Health and Political Crises: This chapter examines the impact of the crises on gender representation in newspaper coverage by analysing how men and women are represented before and during a crisis. It includes a detailed analysis of newspaper articles during the Health Crisis from 2019 to 2021 and the Political Crisis from 2016 to 2018.

Chapter 6 conclusion: The final chapter of the research summarizes the main themes discussed, along with the three dimensions of Fraser's theory of justice: redistribution, recognition, and representation.

Abstract

Sociological studies of the media suggest that systematic underrepresentation and misrepresentation of women undermine progress towards gender equality. Studies focusing on how women are portrayed in Arab-based print media remain scarce. The current study investigates how women are depicted and represented in the Qatari local print media during a period that included both political crisis (Gulf-Qatar crisis) and health crisis (COVID-19). Since crises can disrupt and challenge gender norms and expectations, leading to shifts in power dynamics and gender roles, examining media coverage in times of crises allows for an assessment of whether there were changes in gender dynamics and roles.

This research uses Natural Language Processing to analyse the content of the newspaper articles. The Latent Dirichlet Allocation (LDA) topic modelling tool is used to identify the most frequent topics in articles from Al Raya newspaper published between 2013 and 2021. Additionally, extracting gender information from the articles using courtesy and professional titles made it possible to assess the representation of women across different topics over time. This analysis examines whether women are mentioned more or less frequently in certain topics and events compared to men.

The results show that men were overrepresented compared to women over the years and across all topics. However, the data analysis indicates that men appear more frequently in sport, political and economic topics while women frequently appear in family, health and social and cultural topics. The results also show that the Gulf-Qatar crisis in 2017 and COVID-19 pandemic in 2020, had a substantial influence on representation of men and women. The findings confirm that during a crisis, there was a heightened demand for authoritative voices which were predominantly male due to gendered patterns of leadership. The research concludes that crises are distinct events during which newspaper tend to shed more focus on men than women reflecting the gender stereotypes and the power dynamics prevalent in the society.

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I am grateful for the support I received from all those who wished me success since the beginning of my academic journey.

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At the end of my PhD, I find myself a rather different person than when I began. Change is the end result of all true learning.

Chapter 1

Introduction

This chapter will analyse the role of print media, especially newspapers, in shaping public opinion and social norms. I will also examine the role of governments in censorship and the regulation of the media, including the controlling of newspaper content and the promotion of government-approved narratives, which limit the diversity of perspectives. Moreover, the chapter will investigate how the media portray gender by analysing how newspapers reinforce or challenge existing gender stereotypes. It will compare the representation of women in newspaper to that of men in terms of roles and topics. It will also explore the media landscape in Qatar, highlighting the government's influence on media content and its enforcement of regulations. Qatari cultural values and social norms play a crucial role in the country's media production and consumption, as well as the challenges and limitations to press freedom. Finally, the chapter will examine gender representation in the media's coverage of crises. It will illustrate how crises can disrupt traditional gender roles and shift power dynamics. While these situations can exacerbate existing gender inequalities, particularly for marginalised groups, they also present opportunities to challenge gender norms and promote gender equality.

The media play a crucial role in influencing people's perceptions and moulding their views about different social issues, including gender inequality. Indeed, they function as key players in the propagation of this form of inequality (Gill, 2007). In 1995, the Beijing Platform for Action at the fourth United Nations World Conference on Women highlighted several areas requiring urgent intervention to ensure greater equality and opportunities for *women* in different fields, including the media (Gallaher, 2014; Mannila, 2017). For example, gender differences in the media may support long-standing beliefs about gender (Shor et al., 2015). News is a cultural product of the dominant assumptions about who and what is important, which is determined by gender, wealth, race, power, class and nationality. News is also shaped by the social relations and arrangements that are considered normal, natural and inevitable (Gill, 2007). Article 33 of the Beijing Platform for Action stipulates that the media's potential to promote the advancement of women and equality with men is greater when they present the two sexes in non-stereotypical, diverse and balanced ways (Vandenberghe, 2019). This is because the media function as carriers of cultural concepts, norms and values, and they create gendered representations of women and men (Mannila, 2017).

Over the years, media and gender studies have documented the continuing underrepresentation of women in the news media (Jia et al., 2016). In their book *Arab Women in Arab News*, Al-Malki et al. (2012, p.21) write,

Women are either eclipsed in hard news or fantasized in "women's media" as seeking perfecting as mothers and wives, inveterate shoppers, fashionistas, celebrity watchers, or gossip-mongers, all images cultivated to feed an advertising industry selling non-stop to women.

The sixth report by the Global Media Monitoring Project (GMMP) showed that in 2020, women represented only up to 25% of the individuals featured in the news media and that female subjects and sources in newspapers amounted to only 26% of the total (Macharia et al., 2020). However, the issue is not how many times women appear in the media but how they are represented. Female names and female-related topics remain silenced and stereotyped in the news media. Research across fields demonstrates that women are subjected to gender stereotypes in the media. They are more likely to be associated with "feminine" topics (e.g., the arts, entertainment, lifestyle and healthcare), while men are more prominently featured in traditionally masculine domains, such as politics, sports and business (Matud et al., 2011; Jia et al., 2016; Ullah et al., 2016; Mwatsiya, 2019; D'Heer et al., 2020; Asr et al., 2021; Rao and Taboada, 2021). Women are still marginal to politics- and business-focused news – the topics that tend to draw attention (Shor et al., 2015). The news focuses mostly on the highest strata of the occupational and social hierarchies, in which women continue to occupy somewhat low positions. The patterns of media production and reporting in print media can reflect existing gendered socioeconomic inequalities (Shor et al., 2015). Hence, gender inequalities in the top positions of society translate into imbalanced gender coverage in the news media. This underrepresentation can lead to a lack of diversity in the perspectives and voices presented in the media, as well as the perpetuation of gender stereotypes.

In a society characterised by patriarchal norms, power dynamics are structured along gender lines, which results in women's persistent marginalisation and discrimination in various aspects of life. Analysing the media's portrayal of gender

provides valuable insights into how gendered power is perpetuated and strengthened (Mahadeen, 2022). The present study aims to investigate how women are depicted in Qatari national newspaper and examine the impact of political and health crises on women's representation. This will determine the impact of crises on the representation of women's and men's voices in newspaper coverage.

In this study, I will examine some sources of the above-mentioned gender disparity in Arabic newspaper, based on a content analysis of online articles published in the Qatari daily newspaper *Al Raya* between 2013 and 2021. This analysis may reveal gender bias in terms of underrepresentation or overrepresentation. I will use natural language processing (NLP) to analyse *Al Raya's* newspaper articles. The Latent Dirichlet Allocation (LDA) topic modelling tool will be used to identify the most frequent topics in articles from *Al Raya* newspaper published between 2013 and 2021. Additionally, extracting gender information from the articles will rely on courtesy and professional titles to assess the representation of women across different topics over time.

The Importance of Print Media

Print media play a significant role in shaping public perceptions of gender, and they can either reinforce or challenge existing gender inequalities. Newspapers prioritise informing their readers, and they encourage active engagement rather than passive consumption; therefore, they are vital actors in the perpetuation or critique of gender stereotypes, particularly those that contribute to social disparities (Sheerin and Garavan, 2022). Print media, particularly newspapers, remain a key component of society despite the development of internet-based communication platforms. As was the case in the past, many people still deem newspapers reliable sources of information (Marling, 2010;

Simon, 2015; Mannila, 2017); however, reliability depends on a variety of factors, including reputation, the quality of reporting and adherence to journalistic standards. According to Meeds (2015), compared to other media, such as TV, daily newspapers remain the preferred source of local news among Qataris. Newspapers enable readers to catch up on political, economic, cultural and sports news, to name but a few. They also become points of reference for audiences, and they reshape daily events into clear storylines. The impact of the media is omnipresent in the rapidly changing contemporary world – they “report on current events around the world, they provide frameworks for interpretation, they mobilise the citizenry with respect to various matters, they reproduce the predominant culture, and, of course, they entertain” (Llanos and Nina, 2011, p.6). However, only certain aspects of reality are covered, something which reflects social judgements on a range of topics, including the relationship between men and women (Scheufele, 1999).

In addition to expressing socially dominant values, newspapers constitute platforms for discussing various social matters. The role of print media goes beyond just informing; it is about reforming society, persuading the masses and shaping public opinion (Shaw, 1979). In some countries, among the various forms of media, newspapers are controlled largely by state policies (Selvanathan and Lickel, 2020). In authoritarian settings, state-owned news outlets are subjected to considerable censorship and restrictions, including legal harassment. A report by Freedom House (2021) on press freedom in Qatar noted that the government exerts significant control over print media through ownership, regulation and censorship. If media platforms such as newspapers are censored by the government, media content can be used to influence public opinion

or promote certain political goals. According to Berry (1990), the news media tend to align with hegemonic ideologies that uphold and validate existing political systems. This alignment often involves supporting and perpetuating the sociocultural norms and beliefs endorsed by the government. Government censorship of newspapers can also be used to control the narrative around certain issues or events (Amin, 2002; Hallin and Mancini, 2004). By suppressing certain viewpoints or information, the government can shape the way events are perceived by the public and influence public opinion on key matters (Herman and Chomsky, 2021). The censorship of media content can also be used to manipulate public discourse by limiting the range of acceptable opinions (Heins and Cho, 2003; Herman and Chomsky, 2021). This can stifle dissent, discourage critical thinking and create an environment in which the government's preferred narrative is unquestioned.

The Media's Depiction of Gender

Gender is a central topic in sociology and media studies. In these fields, the media are seen as a double-edged sword: they can contribute to social change through awareness campaigns, or they can serve as a barrier to such change by stereotyping specific groups (Mishra, 2007). The media are seen as central to the construction of gender ideologies; they constitute a central site of struggle in which gendered identities are constantly renegotiated (Tshuma et al., 2022). Gender does not consist of simple, fixed categories (man and woman). Complex social processes produce gender, and they include relationships, boundaries, practices and identities, which shape people's lives and are influenced by historical struggles and social change (Connell, 2009). Stereotyping – the act of routinely ascribing specific features to a particular social group – is one aspect of how gender is produced (Secord and Backman, 1964; Ashmore and Del Boca, 1980).

Gender stereotypes are defined as beliefs about the characteristics and behaviours of each gender (Del Boca and Ashmore, 1980). As they rise to the status of collective beliefs about the attributes that differentiate how women and men are (descriptive level) or should be (prescriptive level), these stereotypes become powerful enough to shape cognitive and physical characteristics, role behaviours and occupations (Johar et al., 2003). Gender ideologies are formed by the accumulation of prescriptive stereotypes, and they serve as beliefs about how men and women should behave (Perry and Pauletti, 2011). The ultimate power of gender stereotypes is that they affect multiple aspects of psychological conduct, including perceptions, memories, social behaviours and interests (Ruble et al., 2006).

Media visibility can enhance entrenched status beliefs and reinforce social hierarchies. When certain individuals or groups are consistently described in the media as powerful, successful and influential, the idea that they are more important and valuable than others is reinforced. In contrast, individuals who are underrepresented in the media, whether due to their gender, race or other factors, can be framed as being less important and less deserving of attention (Shor et al., 2015). Newspapers reinforce traditional values that affect the worth of women in society through their infrequent portrayal of them, which implies that men are more critical to the community (Armstrong, 2004). According to Meyers (1999, p.10),

women are underrepresented in the media in both content and production, [and] the women that do appear in media content tend to be young, conventionally pretty, defined in relation to their husband, father, son, boss

and other men, and portrayed as passive, indecisive, submissive, dependent, etc.

In print media, women are often subjected to gender stereotypes (Matud et al., 2011; Mwatsiya, 2019; Vandenberghe, 2019; D'Heer et al., 2020; Rao and Taboada, 2021). When they are conveyed by prominent newspapers, these stereotypes can influence people's attitudes and perceptions of gender roles, which positions the media as both advocates and adversaries of social change (Joshi et al., 2012). Gallaher (2014) has argued that the media's unequal portrayal of gender has hardly changed over the past 50 years. Despite their increasingly prominent roles, women continue to be underrepresented and stereotyped in the news media (Vandenberghe, 2019). There is growing criticism of the long-standing marginalisation of women in male-dominated professions and sectors, as well as the media's biased representation of them. For example, a report on traditional media platforms (newspaper, radio and TV) by the GMMP found that in the Middle East, women were more likely to be represented in news about social and legal issues (23%) as well as health and science (15%), while they were less likely to be featured in news about politics and government (12%) (Macharia et al., 2020).

Women's representation in the media is influenced by the traditional gender norms that have perpetuated gender inequalities and shaped the way women are portrayed. Despite progress in some areas, women continue to be underrepresented in certain roles and are often relegated to lower positions. For example, in traditional media, women are still predominantly portrayed in average roles, such as personal-experience providers and popular opinion givers (42% and 38%, respectively; Macharia et al., 2020). This means

that they are often featured sharing their personal stories or offering their opinions on various topics. However, skewed samples tend to reinforce traditional gender norms and limit the visibility of women in more diverse and influential roles. The emphasis on supportive and nurturing positions reflects the historical prevalence and societal valuation of certain roles for women. These portrayals mirror broader societal attitudes and expectations about gender and contribute to the reinforcement of gender stereotypes. Iranzo-Cabrera et al. (2023) have argued that the constant media portrayal of women as less competent than men reinforces stereotypes and inequalities.

Women and Socioeconomic Transformation in Qatar

The State of Qatar has undergone many developments and transformations at the social, economic, and political levels. All these transformations are interrelated—whenever there is a change in the economic structure, it is followed by changes in other structures. This section explores the economic and social transformations in the State of Qatar that have shaped and empowered women's roles in society.

The State emerged as a tribal society under Sheikh Jassim bin Hamad Al Thani's rule before the discovery of oil in 1940. The traditional economic pattern was in line with the existing social system, as the society was composed of Bedouins, where the Qatari family was the basic social unit, as well as being the productive unit in which most or all of its members practised one craft such as diving or fishing, which was gender-based work (Allam, 1995). The population relied on the natural resources available in the surrounding environment, such as fishing, pearl trade, transport and maritime trade with neighbouring countries, and a small group of the population turned to agriculture and herding (Al-Abdullah, 2014). The tribe was the social and economic institution and

represented the centre of production and power in society; the division of labour in society was based on gender: work outside the home was exclusive to men, whereas women took care of the household tasks (Allam,1995). This era was characterized by traditionalism in all areas of social and economic life, so individuals sought to earn a decent living.

In the past, family relations were measured by blood ties and descent, which affected an individual's social status based on the tribe to which one belongs. It played a prominent role in the issue of social control of individuals and the organization of society. Family loyalty was more substantial than state loyalty, and due to family cohesion, the prevailing pattern was the extended family in which fathers, sons, wives and grandchildren lived in a house that included everyone, and power was in the hands of the grandfather or father and was transferred to the eldest son in their absence to maintain the family. At the same time, the woman was subordinate to the male, based on the collective mindset and the patriarchal nature of society (The Permanent Population Committee, 2009).

The Qatari society entered a phase of transformation and change during the oil boom 1940-1950, as the revenues of oil investment brought about a qualitative shift in the traditional society, which depended on limited activities and sources of income. In the 60's, the Qatari government expanded the establishment of social services projects, public utilities and infrastructure basics, and health and education services to qualify national workers who are practically and healthily capable of carrying out the burdens of development. However, despite the transformations witnessed by the State after the

discovery of oil and the establishment of industrial projects, the change in the traditional values remained very limited during that period (Ghoneim, 1989).

Oil and gas revenues played a prominent role in Qatar's development. The country witnessed prominent activity heading towards modernization and urbanization. Members of society turned to trade, administrative and government services, police and the army. As for women, they gained the freedom to pursue education, which enabled them to enter the labour market despite facing many challenges rooted in religious and family traditions. However, this was not a justification for excluding women from economic participation, even if this participation was limited in certain areas, for example, the teaching profession (Al-Abdullah, 2014).

Furthermore, the modern family is increasingly built on the principle of partnership, rather than the father being the sole breadwinner (The Permanent Population Committee, 2009). This shift is largely attributed to urbanization, the spread of education, and changing labor market demands. One of the key factors contributing to this transformation has been the increasing participation of women in the workforce. Amid the rapid changes affecting the State of Qatar, the family remains a central institution. From the perspective of the Qatari state and its development strategies, strengthening the role of the family is vital for preserving societal values and ideals. It also serves as an effective instrument in national and political development strategies, supporting the country's progression toward modernity.

With the accession of Sheikh Hamad bin Khalifa Al Thani to power in 1995, development began at a remarkable rate, as he adopted comprehensive sustainable development at all levels and began with the issuance of the first permanent constitution

of the State based on justice and equality among citizens. Believing in the importance of education in the formation of human capital, through which investment and development are carried out in the rest of the sectors in the country to advance society, the Emir issued a decree where education became compulsory for all citizens (Abdel-Fattah, 2012).

Education plays a vital role in enhancing women's circumstances and securing a brighter future for them. The extent to which women can contribute to development depends on the education and training they receive. The rapid development of the educational system in Qatar enabled women to gain a prominent role in society. Education strengthened their capabilities and allowed them to participate effectively in various aspects of life. In light of the State's ongoing support for enhancing the role of Qatari women in all areas of social and economic life, numerous opportunities and benefits have been provided to women. The percentage of Qatari females with a university degree exceeded that of males, reaching 61.6% compared to 39.2% for males (Ministry of Development Planning and Statistics, 2016). The global trend of the rising proportion of female students in comparison to their male counterparts in higher education institution denotes what is called Feminisation of Higher Education (Momani, 2025). Despite women achieving higher educational attainment than men in Qatar and other Gulf states, their involvement in the labor market remains low (Momani, 2025; Hendy, 2016).

Over the years, Qatar has made notable progress in female economic participation, with the female labour force participation rate rising from 27.4% in 2001 to 42.0% in 2021 (Naguib and Aref, 2024); however, their participation remains significantly lower than that of men, despite the government's efforts to enhance women's involvement through legislation aimed at protecting their rights. Even though, the Labor Law of 2004

mandates equal labour rights for men and women, including access to training, promotion opportunities, and equal pay for the same work (Al Meezan, 2004).

Recently, there has been a limited yet proportional increase in women's leadership and political participation (Lari et al., 2022). Qatari women have been appointed as ministers and ambassadors in positions that were previously held solely by men. For example, Ms. Shaikha Al-Mahmoud was appointed as the first Gulf Qatari Minister (Al-Shabrawi, 2013). Additionally, Mrs. Sheikha bint Nasser Al-Misnad became the President of Qatar University (Al-Zeidi, 2010), and Dr. Hanan Al-Kuwari was appointed Minister of Public Health, further showcasing women's involvement in this sector (Al-Zeidi, 2010). While these appointments illustrate significant advancements in Qatar's history, they also indicate progress in the ongoing push for gender equality (Ammar, 2014).

The State of Qatar places great importance on the promotion of gender equality and has made efforts to safeguard participation in national development. Therefore, to maintain constitutional provisions which promote equal rights and duties, regardless of gender, Qatar acceded to the Convention on the Elimination of All Forms of Discrimination against Women on 24 March 2009 (Al Meezan, 2009). However, Qatar's accession to the agreement came with reservations on certain articles which were inconsistent with the Qatari constitution, family and Islamic law (UN Committee on the Elimination of Discrimination Against Women, 2012).

The Qatari Constitution affirms the principle of equality between men and women and stresses the importance of the family, sustained by religion, morality and patriotism as the foundation of society. In line with the international conventions and agreements to which Qatar acceded, Women's empowerment is a fundamental aspect of Qatar National

Vision 2030, which outlines the country's long-term strategy for sustainable development. The Vision emphasizes the importance of building a modern society based on justice, equality, and opportunities for all citizens, regardless of gender. It specifically calls for the empowerment of Qatari women by promoting their educational achievements, increasing their participation in the labour force, and enhancing their representation in leadership and decision-making roles across both the public and private sectors (Qatar National Vision 2030, 2008).

The initiatives and policies which Qatar adopted to promote women's rights and gender equality are consistent with State Feminism. Squires and Kantola (2012) define state feminism as “national machineries for the advancement of women or gender equality machinery within state bureaucracies” (pp.384). Qatar has invested in the empowerment of women through education, healthcare, and workforce participation, often framed within the goals of national development (e.g., Qatar National Vision 2030). Also, key institutions like the Qatar Foundation, National Human Rights Committee and Ministry of Social Development and Family function are state-sponsored vehicles aimed to promote gender-related programs. State feminism in Qatar signals modernity and progressiveness on the international level, particularly through partnerships with the UN and public commitments to conventions like CEDAW—though with reservations on key articles. Hosting global events and participating in international dialogues often showcases elite Qatari women in leadership, even if broader legal and social reforms remain limited.

Despite progress and empowerment initiatives, state feminism in Qatar operates within conservative and patriarchal boundaries, meaning that women's rights are

advanced in alignment with traditional roles and national values, rather than through a transformative feminist agenda. Al-Rasheed (2013), notes that the Saudi state, for instance, has deliberately influenced gender roles and promoted a hypermasculine national identity. This approach not only reinforces the state's authority but also suppresses dissent by controlling women's roles in society. This conservative state feminism is expressed in the national vision of the State of Qatar 2011-2016 which maintains "To expand the role of women in national development and promote the mainstreaming of gender in sectorial development programs along with taking into consideration the cultural and social status of Qatar and the necessity of maintaining the Arab and Islamic identity" (Qatar National Vision 2008,52). It is also expressed in the Qatar National Vision 2030 which articulates "The country envisions a vibrant and prosperous society with economic and social justice by preserving the balance between the environment and human being, the higher Islamic values and strong family ties will constitute its basic pillar" (2008).

State feminism in Qatar has undeniably contributed to expanding educational and professional opportunities for women, particularly among the urban elite. It has also played a role in integrating gender concerns into national development agendas, aligning with state-led visions of progress and modernisation. However, its transformative potential remains constrained by persistent social conservatism, limited legal reforms, and the absence of robust, independent feminist activism. As such, the advancement of women has largely occurred within boundaries defined by the state, rather than through grassroots feminist mobilisation.

Consequently, it acts as both a tool for empowerment and a means of control (Al Dosari, 2019). As Lari (2019) points out, these policies often create a misleading impression of modernity and progress, resulting in a form of partial empowerment that prioritises the interests of governing authorities over genuine women's empowerment. Therefore, modernity does not inherently guarantee women's liberation. Abu-Lughod (1998) argues that modernity in the Arab world has often been selectively adopted, adapted, and resisted, leading to the simultaneous emergence of new opportunities and new forms of social regulation. In such contexts, the transformation of women is not solely about empowerment; it also serves as a political project in which women are redefined as symbols of national progress, subject to new expectations and constraints.

Understanding the Mediascape in Qatar

The small, oil-rich and strategically important state of Qatar is a fascinating example of the changes that are taking place in the Middle East. The unprecedented pace of modernisation and industrialisation in the country has led to profound political, economic and sociocultural changes (Golkowska, 2017). The Qatari mediascape is in a state of flux that involves various aspects, such as ownership, outlets, regulatory frameworks, content production and audience consumption patterns. The country's mediascape includes a diverse range of outlets, including television channels, radio stations, print newspapers, magazines and digital platforms. Al Jazeera Media Network, a renowned international news network, is based in Qatar and has gained global recognition. Regulatory bodies, such as the Supreme Council of Information and Communication Technology and the Qatar Media Regulatory Authority, oversee and regulate the media sector in Qatar. These bodies ensure compliance with media laws,

monitor content, handle complaints and maintain standards of media professionalism. Content production in Qatar's media sector covers various topics, such as news, politics, culture, sports, entertainment and social issues. The country also hosts international media events, including the annual Doha Media Freedom Conference and the Doha Forum, which foster dialogue and exchange among media professionals and policymakers.

Today, both Arabic and English newspapers are published in Qatar; they are all privately owned, but they are aligned with the government's policies (Duffy, 2013). For example, *Al Sharq* was launched in 1978; *Al Raya* was founded in 1979, and *Al Watan* was established in 1995. These Arabic daily newspapers cover local, regional and international news, as well as cultural and social issues. The English newspaper *Gulf Times*, which was launched in 1978, covers a wide range of topics, including local and international news, business, sports and culture. Media institutions in Qatar have exhibited a range of reactions to the revolution in information and communication technology. Recognising the potential of new platforms, they have adapted to capitalise on the opportunities presented by satellite channels, newspapers, online journals and internet news sites (Al Mashikhi, 2014). For instance, Al Jazeera's pioneering entry into satellite broadcasting extended its reach, while established newspapers embraced online editions to cater to changing audience preferences. These changes have contributed to the creation of a dynamic mediascape in Qatar in terms of content, audience reach and technological advancements.

Many factors significantly impact media production and content, as well as audience engagement, thereby shaping the overall mediascape. One such factor is media

policies and regulations, which play a crucial role in governing the media landscape in Qatar. For many years, the media in Qatar have attempted to address issues of transparency. According to Al-Tamimi (1995), the lack of freedom of expression of Qatari media organisations has negatively impacted the development of the state. However, Qatar has recently attempted to promote freedom of expression for citizens in the media. The Qatari Constitution refers to “a free atmosphere whereby all types of expression are allowed and . . . the freedom of press and publication [is enhanced]” (Duffy, 2013, p.47).

Despite some progress, according to the World Press Freedom Index (2021), media freedom in Qatar sits firmly at 25 in the “not free” category, and the country ranks 128 out of 180 in terms of press freedom. Repression and censorship dominate the media landscape in many Arab nations, including Qatar, where press freedom is consistently undermined by abuses and threats (Rugh, 2004; Duffy, 2013). Based on the 2020 World Press Freedom Index published by Reporters Without Borders, Qatar is not a model of media pluralism, and the state’s media are directly controlled by the head of the state. The report also highlighted that the country’s penal code includes provisions that can be used to restrict freedom of expression, including for journalists. The Freedom of the Press 2021 report published by Freedom House similarly noted that media content in Qatar is tightly controlled by the government and that journalists risk arrest and imprisonment for criticising the government or the head of the state.

When examining press freedom in Qatar, it is crucial to understand the nuances of relevant laws and regulations enshrined in the Qatari Constitution and other laws. Article 48 of the Constitution states the following: “Freedom of press, printing and publication shall be guaranteed in accordance with the law” (Al Meezan, 2005). However, certain

provisions in other parts of the Constitution contradict the principles of free expression. The country's media landscape is tightly controlled by the government through censorship and legal harassment, and newspapers must adhere to strict guidelines governing their content. The press is required to obtain licences from the government to operate, and they are subject to strict rules regarding the types of content they can publish. For example, Article 19 of the Constitution states that the government will ensure the state's "security" and "stability," and Article 20 declares that the "state shall strive to strengthen the spirit of national unity, cooperation and fraternity among all citizens" (Al Meezan, 2005). These articles can justify the restriction of certain forms of expression, such as criticism of the government or the head of state, based on the goal of maintaining stability and harmony (Al-Jaber, 2020). For example, Article 47 of Law No. 8 of 1979, which deals with prohibited material, contains the following clauses about what is forbidden (Al Meezan, 1979):

H. All material that is prejudicial to ethics, individual dignity or personal freedom.

I. All material that motivates the commission of crimes, encourages hatred or sows discord in society.

J. Court proceedings and investigations related to any individual or their personal status, unless authorised by a court.

Government laws on newspaper content might shape or constrain how women are represented in the media. Reduced media freedom may limit opportunities to challenge existing gender norms and promote gender equality. Government regulations prevent investigations of personal status matters from being published. Violence against women and honour crimes fall under personal status matters, so these cases are not discussed

in newspaper articles. This is done to protect the privacy of the individuals involved. Furthermore, the media often avoid delving into sensitive gender-related topics, such as domestic violence or women's rights, out of concern for the potential impact of these topics on social norms and stability. This self-censorship reflects not only a cautious respect for traditional values but also, in some cases, the fear of legal repercussions or societal backlash. However, avoiding these topics entirely can also stifle public discourse and impede progress on critical gender equality issues.

Qatar, with its rich culture rooted in Arabic and Islamic traditions, places significant importance on preserving its heritage. This commitment is evident in various aspects of society, including the media (Rugh, 1987). As a result, social and cultural contexts play a significant role in shaping media content (Amin, 2002). Cultural traditions and societal expectations have a profound influence on the portrayal of topics and the selection of perspectives in media coverage. Content selection and the use of language in media creation are both influenced by the cultural environment, which helps protect the nation's heritage. For example, newspapers utilise Arabic as their primary language to protect Qatari traditions (Amin, 2002). Media content often incorporates and promotes the country's established values and practices. By preserving and showcasing its heritage through the media, Qatar aims to maintain its cultural identity.

Media organisations often align their content with dominant norms and values, reflecting the expectations and beliefs of the society in which they operate. This can result in certain topics being highlighted or suppressed based on cultural sensitivities and preferences. Qatari newspaper coverage emphasises the achievements and successes of the country, government and community members through in-depth reporting. The

nation's newspapers often feature stories that showcase Qatar's progress and accomplishments on both the domestic and international stages. According to Al-Jaber (2020), Qatari newspapers, such as *Al Raya* and *Al Sharq*, actively engage with the regional and international media landscape. However, their primary focus remains on local issues and topics, including official state news and the activities of senior bureaucrats. This includes highlighting significant milestones in areas such as infrastructure development, economic growth, technology, culture and sports. According to Abdulmalik (2014), local issues account for 28% of the content on Qatari newspaper websites, followed by political news (22.6%), cultural features (21.3%) and sports updates (11.7%). This suggests that the readers of these Qatari e-newspapers prioritise content that pertains to their immediate surroundings and national discourse and that they are also interested in cultural and sporting events. The latter include international conferences, sports competitions and ambitious development projects. This coverage also extends to the accomplishments of government officials, business leaders and individuals who have made notable contributions in various fields. Furthermore, in Qatar, newspapers often highlight community initiatives, philanthropic efforts and achievements that contribute to the betterment of society. This includes featuring individuals and organisations making positive changes, strengthening social welfare and fostering community development. By focusing on the successes of the country, the government and community members, Qatari newspapers aim to promote national pride, showcase progress and inspire readers to participate in the development of the nation.

However, it should also be noted that the media in Qatar often carefully consider certain events and themes; in some cases, they may choose to handle them cautiously

or even refrain from covering them. This approach reflects the nature of Qatar as a conservative and sheltered community, where maintaining social harmony and stability is a significant priority. The media's avoidance of certain topics stems from their goals of upholding cultural and social norms, maintaining a sense of unity in the national community, side-stepping controversies and conflicts, and preserving the privacy of individuals. Media outlets in Qatar may exercise self-censorship or adhere to guidelines that align with the values and expectations of the society they serve. By approaching sensitive subjects with caution or choosing not to cover them, the media seek to prevent potential disruptions to the social order and uphold the stability and harmony of the community.

Despite the restrictions discussed above, Qatari media do sometimes cautiously approach subjects such as sexual harassment, violence against women and honour crimes. These topics are considered sensitive in the sociocultural context of Qatar, and discussions surrounding them may be limited based on various factors, including societal norms, legal frameworks and cultural values.

In the *Al Raya* newspaper, a few articles on sensitive, gender-related topics can be found. One of these was published in 2022 with the title Arab Traditions That the Overwhelming Majority of Us No Longer Know, Let Alone Practice, it deals with the case of a Jordanian university professor accused of harassing several of his female students. The article focuses on the issue of sexual harassment and highlights the measures that should be taken to mitigate this phenomenon, which poses a threat to the lives of girls in Eastern societies (Faisal, 2022). Another article, published in 2012 with the title Honor Crimes: A Deadly Weapon Threatening Women, investigates honour crimes in Iraqi

society. It presents stories of women who have fallen victim to honour-related crimes (Al Raya, 2012). An article published in 2010, titled Honor Crimes, examines the concept of honour crimes from an Islamic religious perspective (Al-Qaradaghi, 2010).

The coverage of honour-related crimes in the Qatari media focuses on raising awareness, providing information about support services and sharing stories of survivors from other countries. However, few details are provided by the Qatari media when such crimes happen in Qatar. According to Halim and Meyers (2010), the victims of physical violence or sexual harassment are sometimes marginalised and mentioned as an aside in articles focusing on other topics. Regarding honour crimes, media discussions in Qatar may be relatively limited due to the sensitivity of the topic and the local cultural context. While there may be occasional coverage of specific cases or discussions about broader societal attitudes, it is important to note that reporting on honour crimes is regulated. Media outlets exercise caution to avoid sensationalism and harm to the individuals involved. According to Kulwicki (2002), accurate reporting of violence against women in Middle Eastern countries is often limited because many cases of violence go unreported. In news articles, the severity of the violence is often downplayed, and there is also victim blaming, with sympathetic portrayals of those responsible for the crimes; this reinforces women's subordination and lack of voice (Halim and Meyers, 2010).

On the other hand, Qatari media showcase progressive stance with regard to portraying women's achievements, contributions and leadership roles in certain fields, including education, business, and culture. This involves presenting female entrepreneurs, featuring women in positions of power and sharing success stories of women breaking gender barriers.

In some cases, media's progressive stance towards women is primarily driven by state-led initiatives and concentrated on a select few women placed in specific, often symbolic, positions. While, the state promotes an image of modernization, it simultaneously enforces strict controls on women's behavior, highlighting a conflict between progressive rhetoric and conservative practices in Gulf countries such as Saudi Arabia (Al-Rasheed, 2013). This situation highlights the complex relationship between state-building projects and gender norms, which tend to instrumentalize women's roles. Women are often positioned as symbols of cultural authenticity, while their agency is simultaneously restricted (Kandiyoti, 1996). This can lead to Tokenism—where a small number of individuals from a marginalized group are included in an institution or setting to create the appearance of inclusivity without effecting any meaningful change in power dynamics or broader representation (Dunu, 2016). Such practices risk creating a facade of progress while leaving systemic barriers to broader female participation and leadership unaddressed. Moreover, they may limit the diversity of women's voices and experiences that are acknowledged and amplified. The selective visibility of women in media and public discourse often privileges those who conform to traditional cultural norms and expectations, granting them more attention and positive framing. This dynamic reinforces that specific roles and behaviours are more acceptable or desirable for women, limiting perceived possibilities and discouraging others from challenging traditional norms.

However, it is important to note that the media representation of women in Qatar varies depending on the events and themes covered. Certain aspects may receive more attention, while others may be less represented. Sectors and issues that have been traditionally associated with women, such as care, education and health, may be covered

more in the media. Women's participation and expertise in these areas may be highlighted, showcasing their contributions and impact on society. Women, though, are less represented in politics, business and technology, which have historically been male dominated.

It is essential to consider that media in Qatar operate in a broader sociocultural context that requires careful navigation of freedom of expression, cultural norms and societal expectations. The media's approach to discussing topics related to different members of society reflects this situation. Beliefs and standards around modesty and privacy can influence how gender is portrayed in the media. This can result in women being less visible in certain situations, especially when it comes to sensitive subjects. The media's depiction of gender is influenced by social expectations that shape how information is presented and interpreted in news stories.

Gender Representation in Media Coverage of Crises

Media coverage of crises plays a crucial role in disseminating information and shaping public perceptions (Ningrum and Aisyah, 2022). During times of crisis, the media become key sources of information, providing updates, analysis and commentary on unfolding events. Also, when there is a crisis, audiences tend to rely on news media more than they do during normal times. In this context, understanding how minority media engage with and shape audiences becomes increasingly significant (Beazer et al., 2023). Recent studies have demonstrated that crises trigger rapid and unexpected shifts in society, leading to increased media consumption across both traditional and digital platforms (Towers et al., 2015; Westlund and Ghersetti, 2015). These abrupt societal changes highlight the need for real-time news and information (Van Aelst et al., 2021). In

general, the news media employ various framing techniques to present crises, including highlighting the causes and consequences of a crisis, attributing responsibility, providing human interest stories and using emotional appeals (An and Gower, 2009). However, media coverage of crises can also be influenced by bias, sensationalism and agenda setting. According to Huang (2006), organisations adopt various communication strategies in times of crisis, such as denial, excuses, justifications and concessions, which influence the coverage of crisis events. Certain aspects of the crisis may receive more attention, while others are overlooked or underreported (Ribeiro et al., 2018). Thus, the nature of the emergency, organisational responses and media framing together contribute to shaping the public's understanding of a crisis (Huang, 2006; An and Gower, 2009).

During times of conflict, the media can manipulate and shape public perceptions using gendered narratives to serve specific agendas (Kumar, 2004). Depending on the nature and context of the crisis, there can be a significant impact on the portrayal of gender. Different types of crises, such as wars, economic downturns and public health emergencies, can disrupt and challenge gender norms and expectations, leading to shifts in power relationships and gender roles (Sjolander and Trevenen, 2010). During crises, gender roles and dynamics often undergo changes in the sphere where the crisis occurs, and these changes can be reflected in media coverage. In some cases, crises reinforce gender inequalities and perpetuate patriarchal structures. Women may face additional challenges and discrimination during times of crisis in terms of employment (Perrons and Plomien, 2013), particularly in economic sectors that are already male dominated. The same is true of politics. Men are overrepresented in the economic and political spheres, and they are also commonly portrayed as strong and heroic figures responsible for

protecting their communities or nations. They are depicted as individuals who take charge, make important decisions and lead in times of crisis. This portrayal reinforces the notion of male dominance and perpetuates traditional notions of masculinity. In contrast, women are less represented in key roles during emergencies, and they are often portrayed in more vulnerable positions. They are frequently depicted as victims of violence or displacement, who are in need of protection and care. Women may be shown as nurturing caregivers, working with children, the elderly and the wounded. Kumar (2004) affirms that the media's representation of women reinforces gendered power dynamics, presenting women in wartime as needing rescue and protection rather than as active participants. As a result, men are often portrayed as key decision-makers and leaders, while women are positioned in supporting or subordinate roles.

However, it is important to note that the representation of gender in times of crisis is not fixed. Emergencies can also provide opportunities for challenging gender norms and promoting more equitable depictions of women. According to Sjolander and Trevenen (2010), in certain crisis situations, traditional gender roles may become less rigid, allowing women to occupy non-traditional roles and challenge pre-existing power structures. This can lead to the increased visibility and participation of women in decision-making processes and public life. For instance, during the Covid-19 pandemic, women leaders skilfully demonstrated their ability to balance their traditional caregiving responsibilities with their leadership roles, earning recognition from the media for their effective crisis management. The studies by Johnson and Williams (2020) and Voinaoina and Stoica (2023) support this observation, highlighting the positive media portrayals of women leaders during this challenging period. These representations can serve as powerful

examples of women's capabilities, and they can break down barriers to their participation in traditionally male-dominated positions, such as leadership roles, which are crucial during times of crisis. Although women leaders gained recognition for their effective handling of the Covid-19 pandemic, certain studies have raised concerns about the media's portrayal of these leaders. For example, Aldrich and Lotito (2020) argued that media coverage often overlooked the fact that these leaders were from wealthy, developed countries with relatively high levels of gender equality. Similarly, Mukundan (2023) found that media representations of female leaders during the pandemic reinforced stereotypical portrayals of women in politics, emphasising feminine traits rather than their leadership competence.

Chapter 2

Literature Review

This chapter reviews the literature on gender representation in print media, specifically examining how narratives about women are constructed in both Arab and Western contexts. It further explores the theoretical significance of the crisis in gender representation in media, guided by Nancy Fraser's theory of justice. At the end of the chapter, the importance of this research will be highlighted, along with how it addresses gaps in gender and media studies regarding the portrayal of women in Arab print media, framed by specific research questions.

The Representation of Gender in Print Media

The portrayal of gender in media has always drawn considerable attention from scholars interested in the roles and representation of men and women (Asr et al., 2021; Matud et al., 2021; Mwatsiya, 2019; Van Der Pas and Aaldering, 2020). Such interest is due to the pivotal role gender representations in the media play in societal change, as they not only reflect cultural attitudes, but also can impose or challenge stereotypes (Li et al.2023). Gender representation in the media reveals various mechanisms, narratives, and visuals employed by different media streams to construct a general image of women. Each of these elements—whether it be the underlying mechanisms, the stories told, or the visual depictions—plays a significant role in shaping public perceptions of women and their societal roles (Santoniccolo et al., 2023).

There are important complexities and differences in how gender is portrayed across different cultural platforms and contexts (Gill and Baker, 2021). The complexities of representation of men and women in media vary significantly from one region to the other based on customs, religious dogmas and social expectations. Thus, studies have examined women's portrayals in different national contexts to understand how cultural norms and social structures influence media representations of women and how these representations vary globally (Mishra, 2007; Al Malki et al., 2012; Karolak and Guta, 2020). Some have compared the representations of Arab women and men in such media (e.g., Matud et al., 2011; Mahmud, 2012; Jia et al., 2016; Khan et al., 2016; Aznar, 2017; Mwatsiya, 2019; Asr et al., 2021). Others have compared the representations of Arab and non-Arab women (Mishra, 2007; Al Malki and Kaufer, 2009) in Middle Eastern contexts

(Al Sarag, 2010; Hafez, 2010; Mahmud, 2012; Sirsat, 2014) and Western contexts (Falah, 2005; Eltantawy, 2007; Ramírez, 2010; Al Malki et al., 2012; Abdeslam, 2020).

Media's portrayal of women is primarily influenced by the discourses of feminism, with a focus on career success and independence. Karolak and Guta, 2020 found that Saudi women are increasingly portrayed as autonomous decision-makers actively engaged in politics, moving away from earlier depictions that emphasized their dependence on male guardians. Similarly, Hamid et.al., 2021 find that Arab media outlets depict Arab women as independent individuals contributing actively beyond traditional roles of wives and mothers. This portrayal aligns with the broader agenda of conservative Arab governments transitioning towards more moderate stances in the 21st century.

Analysis of media content from the late 20th and early 21st centuries has revealed the persistent association of certain topics with specific genders, which perpetuates stereotypes and limits the representation of women across domains (Gill, 2007). Research on different cultural settings has consistently shown that women are underrepresented in media content; they are less frequently quoted and less visible compared to men (Jia et al., 2016; Ullah et al., 2016; Aznar, 2017; Matud et al., 2011; Asr et al., 2021). Cultural beliefs and religious doctrines play a significant role in shaping gender views. In many contexts, women are still expected to conform to the demands of men (Mwatsiya, 2019). Arabic local media uses religious and patriarchal discourse to portray women (Sirsat, 2014). The press tend to show the power of men, whereas women are presented as following the cultural beliefs that give authority to men (Ullah et al., 2016; Aznar, 2017; Mwatsiya, 2019). Most studies have found that women are underrepresented or misrepresented in leadership contexts; they appear less frequently

or in less authoritative capacities compared to men, which contributes to the perception that professional fields are male dominated (Shor et al., 2015; Chen and Zhang, 2022; Lari et al., 2022).

Media may also focus on traditional roles (e.g., homemaker and caretaker), which reflects the values of the cultures in question. Scholars have highlighted the profound influence of traditional gender roles on the selection of topics in the media and how reporters portray different genders. The studies by Collins (2011) and Rudy et al. (2010) have identified consistent patterns where gender stereotypes shape journalists' choices of stories and narrative approaches. Women are also subject to gender stereotypes, they are more often portrayed in "feminine" news topics, such as art, entertainment, lifestyle and healthcare, while men are prominently featured in classic "masculine" topics, including politics, sports and business (Armstrong, 2004; Collins, 2011; Matud et al., 2011; Jia et al., 2016; Ullah et al., 2016; Mwatsiya, 2019; Vandenberghe, 2019; D'Heer et al., 2020; Asr et al., 2021; Rao and Taboada, 2021; Mamasodikova and Ergasheva, 2022). For example, the coverage of Nigerian women in the news predominantly focused on entertainment and domestic affairs, while areas such as politics, economy, education, health, and the environment received less attention, reinforcing traditional gender roles and stereotypes (Jonah and Nnanyelugo, 2020). Besides, Rapiitse et al. (2019) contend that the media's predominantly features male politicians in the news while marginalizes female politicians, which highlights gender inequality in news reporting.

Furthermore, women are often judged based on appearance, such as social and aesthetic esteem, while men are judged on their functions and status in society (Caldas-Coulthard and Moon, 2010). The media reinforce stereotypes by focusing on celebrities'

beauty and portraying women primarily in traditionally feminine roles (Gurung, 2016). These portrayals reinforce gender norms, affecting how audiences perceive the roles and capabilities of men and women. By perpetuating these stereotypes, the media not only mirror social biases but also reinforce them. For instance, in the Arab world, some newspapers support stereotypical representations of women by emphasising their traditional roles as wives and mothers while disregarding their contributions to the economy and community development (Hafez; 2010; Mahmud, 2012). This is evidence of a self-reinforcing gendered division of roles and responsibilities. Certain topics tend to be more frequent in articles that quote women in private arenas, while other topics are highlighted in articles about men in public domains; this enshrines the former's role as caregivers and the latter's role as leaders and breadwinners (Rao and Taboada, 2021).

The literature shows that Arab women are frequently portrayed as submissive and oppressed in Western media. However, Al Malki et al. (2012) found that such women were portrayed less stereotypically in local news compared to foreign news. Similarly, Elyas et al. (2022) report change in the representation of Saudi women in reporting, reflecting less submissive portrayals that highlight independence and affluence. However, the British Media uses gender biased strategies, highlighting oppressed or submissive stereotypes about Saudi women. The portrayal of Arab women in the media can vary significantly, and the press in the Arab region presents a complex picture. Some publications hail Arab women's achievements and depict them as empowered, educated, and active contributors to economic and social spheres (Najadat, 2006; Al Malki and Kaufer, 2009; Karolak and Guta, 2020; Edam et al., 2024), while others reinforce their traditional gender roles. Similarly, there are instances when Western media highlight the accomplishments

of Arab women, while on other occasions, they characterise them as oppressed and lacking agency (Mishra, 2007; Karolak and Guta, 2020). There has been tremendous interest in Western media about the status of women in Arab societies. Western news media continue to depict Arab women as oppressed by cultural values (Khan and Zahra, 2016; Tabaza and Mustafa-Awad, 2022; Edam et al., 2024). For example, Navarro (2010) highlights Spanish and French media outlets portray Muslim women as oppressed and submissive, reinforcing stereotypes that contribute to Islamophobic and sexist attitudes. Such Western media gendered bias against Arab women intends to alienate them from Western society by referring to them as “others” (Khan and Zahra, 2016; Abdeslam, 2020; Elyas and Abdulrahman, 2020). In some Western media, such as the BBC, the image of Muslim women is mostly dependent on regional coverage, and the news tends to show Arab women as subjugated by religious and cultural values (Al-Hejin, 2012). For example, Kasirye (2021) notes the problematic biased labelling of Arab women as terrorists, often based on their dress, such as the *Hejab*, which is misinterpreted as a sign of religious radicalisation and submissive patriarchy. Similarly, Rahman (2012) indicates that Pakistani Muslim women are often depicted as oppressed victims of religious repressive laws. Their challenges are frequently framed as religious issues, which framing reinforces stereotypes and overlooks the diversity of their experiences. This recurring discursive framing is what Jarmakani (2008) refers to as the cultural mythology of Arab womanhood, wherein Western imaginaries construct Arab and Muslim women through Orientalist tropes such as veils, harems, and belly dancers. These narratives not only serve to exoticise Arab femininity but also impose a sense of discipline on it, portraying these women either as oppressed and in need of rescue or as dangerously deviant.

The Representation of Gender in Print Media During Crises

Crisis situations, such as wars, health emergencies and political struggles, amplify certain gender roles in media portrayals. Men are often depicted as leaders and protectors, while women are shown in nurturing and supportive roles, which reinforces traditional gender norms. However, some crises, such as the Covid-19 pandemic, have brought into sharp focus women as leaders, and there have been nuanced representations based on new understandings of gender roles in response to contemporary challenges. News coverage during global crises often deviates from everyday portrayals. During the pandemic, the media focused on the unprecedented changes that happened in the economy and sociocultural landscape (Tshuma et al., 2022). In times of crisis, media content can highlight gender relations and how they change or are reinforced (Connell, 2009). The varying representation of women in the news in times of crisis has broader implications for analysing media trends, and it can allow us to better understand how different types of crises influence the media representation of gender.

For the purposes of this study, crises can be categorised into political and healthcare shocks. During the former, shifts in gender portrayals occur. Ramírez (2010) found that depictions of Muslim women in Spanish newspapers deteriorated following the 2004 Madrid bombings. Similarly, Eltantawy (2007) observed negative representations of Arab women following 9/11, which reinforced existing stereotypes, a lack of understanding of cultural differences and misrecognition of Arab women's roles (Bashatah, 2017). Farooq et al. (2021) also critique post-9/11 print media portrayals of

Muslim women in *The Washington Post*, arguing that the coverage is shaped by an ideologically charged narrative that frames Muslim women as threats to Western civilization. Falah (2005) and Jiwani (2005) documented how Muslim women in print media were portrayed to reflect the abnormality of life in Muslim patriarchal societies and the oppression of women, particularly after 9/11 and the US invasion of Iraq in 2003. Similarly, regarding political crises, Shukriya (2010) found that the Iraqi press extensively dealt with women's topics after the events of 2003 and that one of the most discussed issues was violence against women. Western media portrays all Arab women as submissive, oppressed, passive, and fearful, despite their active involvement in the Arab Spring and their critical roles during this period, (Karolak & Guta, 2020).

The Covid-19 pandemic is an excellent recent example of a healthcare shock. Scholars have found that women were underrepresented in news about the pandemic compared to men (Jones, 2020; Kassova, 2020; Smith, 2020; Khan and Singh, 2021; Joubert et al., 2022). The gender imbalance in the news media is particularly visible with regard to authorities and experts (Araújo et al., 2022). According to Smith (2020), during the pandemic, the daily UK press predominantly featured male figures in government press briefings, with women leading only two out of 56 briefings. This pattern reflects the broader trend where women are underrepresented in crisis management roles. Smith (2022) found that during the Covid-19 pandemic, women held only about 25% of top administrative and management positions across 62 countries. Similarly, Kassova (2020) highlighted the exclusion of women from Covid-19-related decision-making at the national level, as seen in Nigeria's Presidential Task Force and the UK's daily C-19 meetings, which were primarily composed of men.

During the pandemic, media reports paid significant attention to women's roles as frontline workers and caregivers. For example, nurses and healthcare workers, many of whom are women, were repeatedly highlighted because of their critical roles and the unique challenges they faced, such as inadequate personal protective equipment and long working hours (Phillips et al., 2024). Likewise, stories about women balancing remote work, childcare and household responsibilities became common, and the disproportionate burdens placed on them during lockdowns were emphasised (Sriharan et al., 2021; Hennein et al., 2023).

Scholars have confirmed that women were a minority in key pandemic-related news and that their representation in the news media is limited to certain topics. Jones (2020) found that in the UK, Australia and the US, women made up only a third of quotations in articles related to the coronavirus crisis, with variations by article topic. The ratio of the coverage of women in health news was 37%; in business, it was 27%, and in science and politics articles, it was 24%. One of the most frequent topics linked to women is violence, which was on the rise during the pandemic. Jones (2020), Khan and Singh (2021) and Tshuma et al. (2022) confirmed that domestic and gender-based violence were common issues in women's Covid-19-related news coverage.

During the pandemic, the news media emphasised different roles for men and women. They tended to portray men as experts and women as sources of personal experiences (Kassova, 2020). Joubert et al. (2022) found that in articles about the pandemic in South Africa, women accounted for only 30% of quoted experts, while men predominated as sources, particularly as professors, in various scientific fields. In highly ranked Covid-19 news stories, women were four times less likely to be featured as experts

and commentators. In India, Kenya, Nigeria, South Africa, the UK and the US, women were more likely to be used as sources of subjective views rather than experts sharing authoritative opinions (women constituted 19% of experts, while men amounted to 77%) (Kassova, 2020). Iranzo-Cabrera and López-García (2023) found that during the first wave of the pandemic, scientists were the most frequently cited sources of information in news articles published in Spanish newspapers. However, they observed a significant gender disparity, with male scientists being more frequently mentioned as sources of information compared to their female counterparts.

The Theoretical Significance of Crisis

The literature review above shows that most of news media convey negative images of women, shaped by patriarchal systems. Few outlets offer portrayals of women with strong personalities or notable successes in both their private and public lives. Compared to men, women are still underrepresented and stereotyped as powerless. When compared to Western women, Arab/Muslim women, for example, are depicted as victims of religion and patriarchy. In all cases, Arab women are portrayed negatively in print media relative to other groups. Moreover, there is a noticeable disparity of representation in the media during political and health crises. Although health is a topic frequently associated with women, in pandemic-related news, women were underrepresented compared to men. As highlighted in the literature review, during the Covid-19 pandemic, men were portrayed as leading crisis decision-making, while women were often confined to caregiving roles. Women were frequently featured in news about social topics, while men dominated the coverage of the economic implications of the pandemic. Furthermore, the portrayal of women, especially Muslim women, following a

political shock (e.g., 9/11) is overwhelmingly negative, reinforcing stereotypes of oppression and subordination within patriarchal systems.

Crises, such as natural disasters and political upheavals, offer excellent opportunities to scrutinise the media's coverage of gender (Padovani and Ross, 2015; Elliott and Stead, 2018). The representation of female in print media may be affected by crises that cause sudden changes in social structures (Beazer et al., 2023). While they can introduce new heroes and heroines and spark fresh narratives, crises can also solidify pre-existing gender stereotypes by casting familiar leaders in the usual roles. According to Connell (2011), gender relations undergo significant changes in times of crisis, such as wars and epidemics. The direction of these changes varies based on several factors, including cultural context and the nature of the crisis. According to Habermas and Marcuse (Fiske, 1993), crises act as revealing forces, unmasking the underlying structures of power and domination that are often veiled during periods of stability. Examining media coverage during crises allows for an assessment of how gender dynamics are manifested in the news.

Feminist Theory

This thesis draws on key feminist theorists whose works illuminate the intersection of gender, power, and representation during times of crisis. These theorists, Chandra Talpade Mohanty, Judith Butler, Nancy Fraser, Valentine Moghadam, Deniz Kandiyoti, and Suad Joseph, have been selected not only for the breadth of their contributions to feminist theory, but also for how their work collectively helps to unpack the gendered dynamics of media representation in contexts of political upheaval and sociocultural transformation, especially within the Arab world.

Starting with Chandra Talpade Mohanty (1991), her postcolonial feminist critique serves as a methodological anchor for this study. In *Under Western Eyes*, in her critique of the representation of “Third World women,” in Western feminist discourse as ‘passive victims,’ Mohanty critiques the tendency in Western feminist discourse to represent them as the so-called ‘passive victims’, presenting “a monolithic representation of Third World women.” This research’s ethical stance with regard to an analysis of Arab women’s media portrayals hinges on her insistence on situating textuality in context and speaking with a local voice. In addition to warning against the homogenization of narratives, Mohanty’s work is consistent with the aim of this thesis, which seeks to understand the local socio-political context in which print media occurred. This resonates with Deniz Kandiyoti’s (1997) concept of the *patriarchal bargain*, which offers a nuanced framework for understanding women’s strategic negotiations within restrictive gender systems. Kandiyoti’s insights stem from ethnographic and socio-political analyses, but she does not focus specifically on media; rather, her work prompts this thesis to avoid binary portrayals of women as either wholly oppressed or entirely empowered. Her contribution, then, is not in the domain of media analysis per se, but in urging a reading that accounts for complexity and historical contingency in women’s public representation.

Judith Butler (1997), although best known for theorizing gender performativity, is engaged here through her critique in *Merely Cultural*, which interrogates the separation of cultural and economic struggles in justice frameworks. Her position—that identity is discursively constructed and central to political recognition—reinforces this thesis’s approach to analyzing the performative dimensions of women’s identities in media. However, Butler’s work is balanced with that of Nancy Fraser (1997), whose *tripartite*

model of justice—economic redistribution, cultural recognition, and political representation—offers a comprehensive theoretical scaffolding. Fraser’s concept of “participatory parity” underscores the multidimensional injustices that shape and constrain media portrayals of women in crisis contexts. While Butler emphasizes cultural production and discourse, Fraser integrates structural and political concerns, making her framework especially apt for examining print media’s role in either reinforcing or challenging inequalities.

Valentine Moghadam’s (2014) contribution lies in her examination of women’s roles in post–Arab Spring political transitions. Unlike some of the other theorists, Moghadam confronts empirical data by exploring how political discourse and transitions repeatedly reinstate patriarchal exclusions through regional case studies, surveys, and institutional analysis. This thesis’s media analysis entry point is her argument that crises may temporarily elevate or suppress women’s visibility in public life. But just how generalizable is her evidence regarding the cyclical nature of gender visibility? Does her argument about the cyclical nature of gender visibility in different national contexts and media systems have a different political history?

Suad Joseph (2000) also provides region-specific insight, though more sociological than media-focused. Her exploration of gendered citizenship in Arab societies suggests that national identity is intertwined with familial roles, often assigning women symbolic positions as mothers, sisters, or moral anchors. Although Joseph does not directly analyze newspapers, her framework of kinship and moral citizenship helps decode how media representations often recast women into archetypes that support

national cohesion. This has implications for how crises shape media portrayals by intensifying calls for women to embody normative roles in the service of collective identity.

Bringing these thinkers into dialogue reveals overlapping concerns. Both Mohanty and Kandiyoti contest simplified or universalist representations of women, particularly in the Global South. Cultural and material struggles are present in Butler and Fraser's accounts of justice, as the authors debate the balance. Both Moghadam and Joseph are empirically and regionally oriented, yet contextualize how gender functions by means of both institutional exclusion and symbolic representation in Arab societies. Together these theorists do not offer just isolated insights but a synthesized lens from which to consider how gender, crisis and media come together.

Theory of Justice

Nancy Fraser's (2005) theory of justice holds that every individual has the right to basic liberties and equal opportunities. A core concept of Fraser's theory is participatory parity—that is, the idea that all members of society should be able to participate as equals in social life (see also Fraser, 2003; Ferrarese, 2014). In a discussion of this concept, she wrote, "Justice requires social arrangements that permit all to participate as peers in social life" (Fraser, 2009, p.16). For Fraser (2003), a just society is realised when all its members have unimpeded access to its various domains. Participatory parity is the foundation of the three dimensions of Fraser's theory of justice—redistribution, recognition and representation—which pertain to the economic, sociocultural and political spheres, respectively (Fraser, 2008, 2009; see also Ferrarese, 2014; Le Goff, 2022). To achieve justice in society, people must be free from economic exploitation, cultural domination and political exclusion (Fredman, 2007).

Redistribution

The dimension of economic redistribution (equal share) concerns the allocation of the material resources that people need to participate in social life on equal terms (Fraser, 2000, 2003). Redistribution targets economic injustices, which are broadly defined by Fraser (2003) in terms of the distribution of opportunities, resources and roles in society. In media contexts, redistribution refers to equal access to platforms where women, in particular, can have their voices heard. Fraser (2003) explained that redistribution is not limited to material resources but applies also to jobs, opportunities and the social roles linked to gender equity. During crises, men dominate public narratives, while women remain subordinate. For instance, the media reports on the Covid-19 pandemic often portrayed men as policymakers and crisis managers, while they stereotyped women as caregivers and community supporters (Smith, 2020). This imbalance underlines a redistributive injustice in which women are excluded from the positions that shape public discourse.

Recognition

The dimension of cultural recognition (equal respect) relates to institutionalised value patterns that allow or deny people the social status of full partners in social interactions, as well as the opportunities for achieving social esteem (Fraser, 2003). Recognition pertains to the cultural and symbolic dimensions of justice. Fraser (2008) defines misrecognition as the systemic devaluation of certain groups, which denies them equal social standing. In media representations linked to females, recognition involves portraying women in ways that affirm their contributions, identities and roles in society. Fraser (2003) argued that misrecognition is connected to cultural domination, which

includes stereotypical portrayals that limit the perceived worth of certain groups. Cultural misrecognition denies women the social esteem needed to gain participatory parity. For instance, during political crises, media narratives often depict male political figures and fail to include the perspectives and contributions of women to community resilience (Shor et al., 2015).

Representation

The third dimension-- the dimension of political representation (equal say) addresses how decision rules around membership and procedures can allow or deny people a voice in public deliberations and democratic decision-making (Fraser, 2009). representation This dimension concerns political inclusion and equal opportunities to participate in decision-making processes and public discourse (Fraser, 2005). According to Fraser (2008), exclusion from representation is a form of political injustice. When it comes to women in the media, representation relates to how women's voices, perspectives and contributions feature in public narratives. For Connell (2009), the media are sites of struggle over gender identities, especially during times of social turbulence when traditional authorities have higher chances of dominating the news. According to Fraser (2017) and Ferrarese (2014), usually, male viewpoints within institutions are privileged, while women are relegated to secondary, stereotypical roles.

Fraser's theory of justice, which is based on the norm of participatory parity, is an excellent analytical tool for understanding the representation of women in Qatari newspaper during crises. According to Fraser (2003), every person, regardless of gender, should be able to participate in social life without facing economic, cultural or political

obstacles. Her theory is built around three interlinking dimensions: redistribution, recognition and representation. These dimensions align with the objective of this research, which is to understand how women are represented in Qatari newspapers and the impact of the crisis on their representation. This is particularly relevant to the Qatari context, where the interplay of state-led modernisation, cultural conservatism, and geopolitical tensions significantly influences gender discourse. By applying Fraser's dimensions to the media coverage of the COVID-19 pandemic and the Qatar–Gulf crisis, this research interrogates how crises reinforce or disrupt gender norms and how feminist concerns about visibility, authority, and inclusion are negotiated within the state's media apparatus.

Research Questions

For years, sociology has focused on investigating mass media content and its impact on various social issues; recently, the focus has shifted to gender issues in news content. Print media are powerful social arbiters; they both reflect and craft opinions, which is why they have received significant scholarly attention (Sheerin and Garavan, 2022). Globally, a review of the media shows that women do not receive detailed coverage compared to men. In some parts of the media, topics such as women's rights and violence against women are almost absent. Only family- and motherhood-related issues are prominent. The news media do not focus on topics that could help women change their lives and advance over time, such as female education, employment and professional development. Furthermore, according to Al Malki et al. (2012), gender and media studies should be designed carefully because the media consistently portray Arab

women as powerless, passive and culturally subordinate to males. When analysing gender issues in the Middle East, it is important to consider the historical, political, and cultural contexts (Mohanty, 1991; Kandiyoti, 1996).

In addition, there is a scarcity of research on how the lived experiences of women are portrayed in the Gulf, especially in Qatar (Golkowska, 2017). After evaluating the effect of stereotypes in Western mass media depictions of Arab women, Al Malki et al. (2012) concluded that most media research about such women was Eurocentric. This reflects universalist assumptions within Western feminist discourse that impose Western norms and values as the standard, consequently marginalizing the voices and experiences of non-Western women (Mohanty, 1991). Additionally, as Ahmed (1995) noted, Western discourse about Arab societies is highly gendered, and Arab women and girls are featured frequently in media reports about events in the Middle East. This highlights the importance of moving beyond Western-centric frameworks to better understand the unique experiences of women in the region (Kandiyoti, 1996).

In their study, Al Malki et al. (2012) examined news briefs gathered from Mideastwire, a news agency that collects daily news briefs from over 20 Arab countries and translates them from Arabic to English to make them available to Western readers. The authors initially collected 2,323 news briefs, but they narrowed down the dataset to 237 articles from *Al Hayat*, *Al Quds*, *Al Arabi* and *Asharq Al Awsat*. In contrast, the news briefs that were excluded either lacked mentions of women or portrayed them minimally, effectively omitting women as active subjects in the news narratives. By focusing on articles that engaged with women as central figures, the researchers aimed to better understand how women are represented when they do appear as news narrative actors.

Using a quantitative–qualitative approach in their interdisciplinary study, Al Malki et al. concluded that Arab women were usually portrayed as active rather than passive in news briefs produced in their cultures of origin. The authors conducted their study at a time when the internet was already accessible to people globally. Their findings contradict the large body of work on the representation of Arab women in Western pre-internet print newspapers, according to which Arab women are constantly referred to as passive.

The present study builds on the research of Al Malki et al. (2012) by examining the representation of women in print newspapers produced in their culture and native language (Arabic), without the intervention of translators, who might introduce bias. However, Al Malki et al. examined liberal, pan-Arab newspaper. In contrast, this study analyses Qatar’s daily newspaper, which contain the implicit and explicit ideologies of the country’s governing authorities. Furthermore, the corpus used by Al Malki et al. consisted of news briefs translated into English by Mideastwire. The material came from *Al Hayat*, a newspaper published in Lebanon, which has the most open and diverse news media in the region (Freedom House, 2024); *Al Arabi*, an Egyptian party-affiliated weekly newspaper; *Al Quds*, a Palestinian daily newspaper; and *Asharq Al Awsat*, a UK-based newspaper. My corpus consists of articles from the Qatari daily newspaper run by the government.

The significance of this study lies in its focus on an underexplored area. While previous media studies have investigated women in Western media, this research explores how they are depicted in Qatari national newspaper and examines the impact of crises on women’s representation. The study aims to fill the gap in gender and media studies regarding the portrayal of women in their local print media. Extensive research

has been conducted on how men and women are depicted in the mass media of the West; however, few studies have been carried out in Arab countries (e.g., Al Malki et al., 2012). According to Alrababa'h and Blaydes (2021, p.694–695), although “political scientists increasingly rely on machine learning to analyse large datasets made up of text, Arabic-language materials remain relatively unexplored.” Currently, there are few studies of extensive texts from traditional Arab media. The present research illustrates the importance of examining Arabic material to comprehend how women are represented in print media. Investigating how women are portrayed in print media rather than how many times they are represented is what matters because frequent representation does not mean that women enjoy equal rights and opportunities. The data consist of original articles from the daily newspaper *Al Raya* published between 2013 and 2021. To achieve the study's objectives, the following research questions are posed:

1. To what extent does *Al Raya* newspaper promote gender equality discourse?
2. How do crises impact women's representation?
3. How does *Al Raya* newspaper reinforce or challenge existing gender stereotypes during crises?

Chapter 3

Methodology

This study aimed to investigate how women are portrayed in Qatari national newspaper and examine the impact of crises on women's representation. To fulfil this aim, I chose the Arabic newspaper *Al Raya* – the most read and popular in Qatar – to identify the topics in which women and men were portrayed and assess their representations according to the topic. This chapter explains the process of selecting the data for this study, the LDA modelling tool used to determine the top-weighted topics and relevant words in the articles, and the process of enhancing the LDA and extracting gender information to assess the representation of women.

Data

This study used articles from the Qatari daily newspaper *Al Raya* to analyse how women and men are portrayed in print media. *Al Raya*, first published in 1979, is a semi-official daily newspaper. Although it is not directly controlled by the government, it reflects a pro-government stance. It provides news on local and international political, economic, social, sports and environmental events. *Al Raya* was chosen because it is the most widely read newspaper in Qatar. According to the 2009 Media Sustainability Index, the top three privately owned daily newspapers in Qatar are *Al Raya* (18,000 copies sold per day), *Al Sharq* (15,000 copies) and *Al Watan* (15,000 copies). Between 2014 and 2018, *Al Raya* sold approximately 20,000 copies on weekdays and 12,000 on weekends (Muhamad, 2021).

To maximise the size of the study sample, I decided to use as many *Al Raya* articles as possible. However, the articles found in the newspaper's online archive were in a noneditable PDF format, which could not be used for the analysis. The study required the articles to be in an editable format that allowed extracting the text. Therefore, I chose to use the articles found in the "Local News" section of the newspaper. Only articles dated between 2013 and 2021 were selected. The remaining articles were eliminated due to the huge variation in the number of published articles prior to 2013. For example, in the period 2004–2012, between approximately 500 and 1,000 articles per year were published, compared to the period 2013–2021, when around 5,000 articles were published yearly. Data consistency was deemed vital for reliability before processing. Recently, the newspaper industry has been influenced by technological changes in the production and diffusion of news, with a shift to online editions that has transformed readership patterns

(Organisation for Economic Co-operation and Development, 2010; Franklin, 2013). Different samples could have been selected to fill the gaps in the number of articles over the years, but information vital to the analysis would have been lost by doing so. To achieve parity in the number of articles and avoid improper sampling, the articles from 2004 to 2012 were eliminated.

Data Collection

To extract the content of all the articles' HTML pages and convert it into text files, I used Python's web scraping tool. Web scraping is used to transform unstructured data found on the web into structured data that can be stored and analysed in a database or spreadsheet (Sirisuriya, 2015). Web scraping is widely recognised as an efficient and powerful tool for collecting vast quantities of data (Mooney et al., 2015). According to Parvez et al. (2018), web scraping is an excellent technique because it can be used for both structured and unstructured HTML pages. In the present study, performing web scraping did not involve any complications as *Al Raya* has a very well-structured HTML code. Web scraping creates a script that opens each article link and collects several HTML attributes, such as date, author, title and text. The collected data were stored as TXT files, with additional fields for metadata (author, title and date).

Sample

The data extraction produced a sample of 61,788 articles for the period 2013–2021. This sample was sufficient to track the changes in gender representation in the newspaper. Figure 1 shows the number of extracted articles from 2013 to 2021.



Figure 1. Number of articles per year

Topic Modelling with LDA

Identifying the newspaper topics in which women and men are portrayed and assessing their representation according to the topic required using a tool that could scan a large amount of text and assign words to topics. Topic modelling with LDA is an NLP technique used to identify clusters or groups of similar words in a body of text. The use of topic modelling to analyse large volumes of text is still in its infancy in sociological reach and has only relatively recently been advocated by sociologists (Nelson, 2020; Weller, 2023). This research is pioneering in using topic modelling with LDA to analyse large data. LDA has become a standard tool for understanding large text corpora, highlighting various topics in a set of articles and determining which articles are attributable to which topics. According to Graham et al. (2012), topic modelling is a valuable tool for analysing a great number of documents from an archive as it helps identify which ideas are represented

without having to read the entire set. More specifically, this study used “statistical methods that analyse the words of the original texts to discover the themes that run through them, how those themes are connected, and how they change over time” (Blei, 2012, p.78). Social scientists increasingly see the value of topic models in measuring latent linguistic, political and psychological variables (Roberts et al., 2013). LDA uses two methods to assign words to topics, which are identified based on how words cluster within the text: hard clustering and soft clustering. The former refers to assigning a word to exactly one cluster of words – a topic. The latter refers to assigning a word to multiple clusters of words. To enhance the LDA, this study employed soft clustering because of the complexities of the Arabic language. Arabic is a morphologically rich and complex language thanks to words inherent inflectional and derivational characteristics. In addition, soft clustering improves accuracy when articles can have multiple interpretations or belong to several topics simultaneously.

In LDA, each topic is represented as a small number of similar keywords that occur together and form a semantic cluster. The words for each topic are estimated based on the statistics of the words in the entire text. After LDA is performed, each document can be represented as a combination of many topics, with one topic usually expressing the most information. In LDA, a topic is a collection of words and their probability estimates. LDA estimates the probability that a given document belongs to a given topic; this is called gamma probability. After using LDA, I extracted the gamma probabilities for each document; then, I chose only one topic with the highest gamma probability for each article.

Lemmatisation

One of the standard procedures of language pre-processing is lemmatisation, or tokenisation, which is defined as breaking down a document into tokens (words) as strings of characters separated by spaces (Maier et al., 2018). Lemmatisation removes the inflections of words and returns words to their lemma (root word), which allows treating different word forms as one – that is, lemmatisation reduces word variations. “Lemmatisation is performed using a lookup process during run time, where each token or term is checked for presence in a dictionary of lemmas (terms) provided by the user” (Rao and Taboada, 2021, p.5). In the present study, lemmatisation was applied to the corpus to improve the accuracy of the LDA model. Lemmatisation improves the results of various NLP tasks by tallying the frequencies of occurrence of the words in a corpus.

LDA Parameter Setting

When specifying a topic model, several parameters, such as K (the number of topics), α (the topic distribution per document) and β (the word distribution per topic), must be optimised for effectiveness. According to Maier et al., “the selection of appropriate pre-parameters and the number of topics is crucial to retrieve models that adequately reflect the data and can be meaningfully interpreted” (2018, p.100). Setting a high value for the number of topics might result in similar topics that cannot be meaningfully distinguished (Grimmer, 2010; Hasan et al., 2021). Conversely, Evans (2014) demonstrated that setting a low number of topics might lead to broad topics that combine different aspects.

As suggested by Mimno et al. (2011), coherence measurement was used to find appropriate candidate models with different numbers for the proposed K topics. Because the topics were represented as the words (a specific number of words; for example, 10)

with the highest probability of belonging to a specific topic, the coherence score measured the similarity of these words. When the topic consisted of semantically equivalent words, such as “job,” “office,” and “desktop,” it was considered coherent. Therefore, the topics were considered highly coherent when they consisted of semantically similar words. Thus, several candidate models were run on varying numbers of topics to choose the one with the highest coherence value, which offered meaningful and interpretable topics.

Figure 2 shows the coherence scores of 16 models, with topic numbers ranging from 20 to 50 (only even numbers of topics are displayed). For the LDA model used in the present study, $K = 40$ was chosen because it gave the highest coherence score. This model produced categories that made sense and provided insights into the structural categories of the texts. Regarding the number of parameters included, the values of α and β remained fixed at 0.025, which is the default value proposed by the widely used topic model library Gensim (Rehurek and Sojka, 2010).

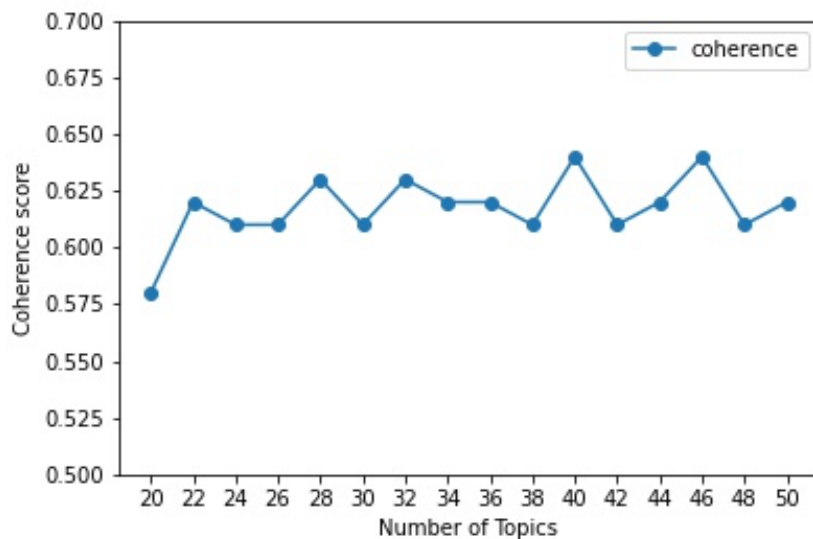


Figure 2. Coherence scores for the numbers of topics, ranging from 20 to 50 topics

Extracting Gender Information

Machine learning have recently brought about radical changes in the social sciences, particularly in the analysis of texts using natural language processing (NLP). These applications address complex issues related to language structure. However, the majority of NLP resources and library tools are developed within English-language databases. Nevertheless, scholars, using Arabic-language corpus in their research and studies, have started to employ NLP applications as tools for text analysis. Arabic is considered the lingua franca worldwide, serving as the official language in 22 countries. It is also classified as the fifth most commonly spoken language, with over 400 million speakers globally (Soliman et al., 2017).

Previous research has primarily centered on addressing gender bias using English NLP models and systems. The challenge of addressing gender bias in languages that are poorly resourced and/or have complex morphological structures has lagged behind, mainly due to the scarcity of datasets and resources. This study contributes to the field by describing a technique to extract gender information from news articles using resources and tools associated with Arabic Natural Language Processing (ANLP).

One of the extensively studied areas within NLP is gender-bias analysis. Various approaches have been tested and proposed as tools for extracting gender information from text. For instance, one of the most straightforward methods to extract gender information from names mentioned in larges texts is Social Security Administration of the US government (SSA) database, which has a total of approximately 330 million names, organized by date of birth, frequency, and gender (Asr et al., 2021).

Using Named Entity Recognition (NER) technique offers an alternative method to identify noun entities, such as names, organizations, and locations within text. NER is widely used and has demonstrated fairly high accuracy across many languages. For instance, the Gender Gap Tracker, a software system examines gender bias by tallying the number of men and women quoted in texts, relies on NER techniques.

Other techniques include gender prediction web services which are employed to determine whether a name belongs to a man or a woman (Asr et al., 2021). This name-based gender prediction can be accomplished through Web-based APIs like Gender API or Local APIs, as well as open-source packages like a Python library called Gender Guesser. These APIs and packages rely on lists of first names to predict the gender associated with names in text (Das and Paik, 2021).

Although there has been progress in Arabic Natural Language Processing (ANLP) research in recent years, the task remains challenging for several reasons. Firstly, Arabic encompasses three primary forms of the language: Classical Arabic (QA), employed for the Quran and literature; Modern Standard Arabic (MSA), used for formal writing; and Dialectal Arabic (DA), utilized in daily communication (Boudad et al., 2017). Secondly, the Arabic language alphabets are also utilized for writing other languages, such as Urdu and Persian (Habash, 2010). Additionally, the absence of capitalization in Arabic Named Entities makes it difficult to distinguish them from other linguistic forms like adjectives, pronouns, and verbs (Farber et al., 2008). Furthermore, Arabic text contains diacritics representing most vowels, which influence the phonetic representation and impart different meanings to the same lexical form. However, the majority of Arabic texts are

written without diacritics, resulting in potentially incompatible morphological analyses for the same lexical form (Shaalán, 2014).

Due to the linguistic complexities of the Arabic language, gender inference studies have suggested several heuristic rules to extract gender information from text. The Arabic language has a gender marker for feminine nouns and adjectives. For example, the taa marbouta letter ة is a feminine suffix; when added to words such as طبيب (male doctor) and مدير (male manager), it turns them into female forms (طبيبة [female doctor] and مديرة [female manager]). Taa (ت) is another feminine suffix that converts a masculine form into a feminine one; for example, with it, the masculine verbs قال (said) and ذهب (went) become the feminine verbs قالت (said) and ذهبت (went). There are also some cases in which a word has a feminine suffix, but its gender is unknown. In Arabic, gender-signifier pronouns (هو [he] and هي [she]) can hardly distinguish between male and female words because they may also refer to non-human things, such as locations, organisations and objects. Therefore, they are not reliable in predicting the gender of the context. To deal with this challenge in data analysis, different techniques were tested to divide the texts into gender-based categories, as discussed in the following paragraphs.

One common approach involves analyzing the context surrounding Named Entities (NE). A study conducted by Traboulsi (2009) introduced a grammar-based method for person Named Entity Recognition (NER). It was found that Arabic is like English in that persons' names are found in proximity to reporting verbs. However, this method has its limitations since Arabic sentence structure and words order within are not fixed and can change drastically depending on the adjectives and titles used after a

person's name. Unlike Arabic, English has more fixed syntactic structure which makes it easier to detect persons' names in large texts using the grammar-based method.

Elsebai and Meziane (2011) study offers a novel method for extracting persons' names from a large corpus employing a set of handcrafted linguistic commands, such as if/then /else process....., with aim to pinpoint persons' names. This system addresses the unique challenges posed by the Arabic language, such as its rich morphology, lack of capitalization, and the use of diacritics. The system demonstrated that the rule-based approach effectively identified person names with a high degree of accuracy, showcasing its potential for applications in information extraction and text analysis within Arabic-language media.

Another method for determining gender identities in Arabic text involves gender marking, which classifies nouns as either masculine, feminine, or potentially both. Habash et al. (2019) address the challenge of gender bias in Arabic Natural Language Processing (NLP), particularly in machine translation (MT) systems that often produce gender-neutral outputs. Recognizing that Arabic is a morphologically rich language where gender agreement is essential, the authors propose a system to generate gender-specific reinflections for first-person singular constructions. The gender of the noun or adjective determined the label for the sentence (M for masculine or F for feminine). Three Machine Learning Models were applied: the Lexicalized Model, Delexicalized Model, and Joint Model, all using logistic regression with a liblinear solver. These models used features derived from the input sentences or their morphological features. The results indicated that the Joint Model performed exceptionally well, with high precision and recall, combining the strengths of both the Lexicalized and Delexicalized models.

Additionally, Alhafni et al. (2020) present a novel approach to address gender bias in Arabic natural language processing (NLP), particularly in machine translation systems. Recognizing Arabic morphological structure requirement for gender agreement in verbs, adjectives, and pronouns, the authors propose a method to generate gender-specific sentence variants based on user-specified grammatical gender preferences. This approach has limitations on identifying gender as it only considers binary gender (masculine/feminine) as encoded in Arabic grammar. Also, the identification of gender depends on explicit morphological markers, so it may fail in cases where such markers are ambiguous or missing (e.g., short or imperative sentences).

In NLP, there are different approaches to gender prediction in texts. Given the aims of the present study, I tried to accurately identify gender based on people's names using the Gender Gap Tracker,¹ which relies on names to assign gender to sources. Automatic gender prediction typically relies on the predictable gender associations of first (and sometimes last) names. Ready-made lists containing male and female Arabic personal names were an option to divide the texts into gender-based categories, but these lists did not cover all the names in the corpus. Therefore, male and female name lists were created to cover all the names mentioned in the texts. These new lists were extracted directly from the texts using the Polyglot name-entity extraction tool.² To differentiate between the male and female names, feminine marker suffixes were used because, in newspaper articles, people's names are usually preceded by titles that are clearly distinguishable

¹ The Gender Gap Tracker downloads and analyses the online daily publications of seven English-language Canadian news outlets, and it enhances this data with multiple layers of linguistic information.

² Polyglot is a natural language pipeline that supports different major languages, including Arabic. Named-entity extraction extracts phrases from a text and recognises three categories of entities (locations, organisations and people).

according to gender, such as **سيد** (Mr) and **سيدة** (Mrs). A person's name was considered feminine when the preceding title contained a feminine marker; correspondingly, a name was considered masculine when the title did not contain a feminine marker. However, the results were inaccurate because the individuals mentioned in the articles were referred to by their first, second or last names. So, the output was affected because the second and last names were always masculine, as most articles were labelled masculine.

To deal with these challenges, another method for automatic gender prediction was employed, called named-entity recognition. Farasa was used in this case, which is an Arabic NLP suite of tools used for text analysis. The difference between Farasa and other name extraction tools is that Farasa can label first names and last names separately, using abbreviations such as B-PERS for the first name and I-PERS for the last name. To avoid excess masculine counts caused by a person's second or last name, the first name (B-PERS) was specified with Farasa. Then, using the feminine marker suffix of the preceding word, the gender of the name was identified. Thus, the gender of the dominant character (male or female) determined the article's label. However, there were still many gaps in the gender label output because many words were treated as people's names when they actually referred to organisations and corporations. The mislabelling of local database names by Farasa is a possibility, especially when many organisations and locations have human names. For example, Hamad Medical Corporation and Hamad Bin Khalifa University are leading organisations in Qatar named in honour of the former ruler of Qatar, Hamad. Furthermore, feminine marker suffixes were not precise enough to categorise the gender of names because many words contained a feminine marker, but they were not related to persons, such as **جامعة**

(university) and مؤسسة (organisation). These words include feminine markers, but they are not human names. Even if I excluded these cases, it was difficult to cover all the terms.

To resolve the previous inaccuracies in extracting gender information, I relied on courtesy titles, such as سيد (Mr) and سيدة (Mrs/Ms), and professional titles, such as دكتورة (female doctor), دكتور (male doctor), مديرة (female manager) and مدير (male manager), because titles are typically used before surnames or full names to address or refer to men and women. Having fewer neutral titles in Arabic, such as سعادة (his/her excellency), was helpful in avoiding incoherent results; these titles were excluded from the human title lists (Appendix: examples of articles assigned to each of the gender categories). The lists of Arabic titles for men and women provided by Mubarak et al. (2022) were used, which are based on an analysis of 160,000 Arabic Twitter accounts. By counting the number of feminine and masculine markers in each article, the most common name titles for each gender were analysed to determine the articles which were mostly related to men and those pertained primarily to women.

The articles were assigned gender labels and divided into four groups: 1) articles that mostly discussed men, 2) articles that mostly discussed women, 3) articles that discussed both men and women and 4) articles that discussed neither.

After the LDA and labelling, each article contained information about two variables: the topic (one out of 40 topics) and the gender category (female, male, both or neither). For this reason, the topics were the same across the gender categories, but the distribution varied between categories.

Segmentation

To extract gender information from the texts, the feminine and masculine markers had to be identified. In English, feminine and masculine markers (e.g., pronouns) are written separately from root words (e.g., “his book” or “her book”). However, this is far more complex in Arabic, where feminine and masculine markers, as well as other inflections, are attached to words, such as **طبيبة** (female doctor), which consists of the root **طبيب** (doctor) and the female marker **ة**. This makes the process of extracting feminine and masculine markers rather complicated (Benajiba and Zitouni, 2010). To tackle this problem, I used Farasa’s segmentation system, which separates all prefixes and suffixes attached to roots. This makes it much easier to obtain the required information once words are segmented correctly. The human title lists used to identify feminine and masculine markers were segmented as well because if left unprocessed, they would not match the segmented texts. To use the lists efficiently, I brought them into the same form as the articles.

Gender Labelling Accuracy Validation: Manual Annotation

To validate the accuracy of the automatic annotation based on courtesy and professional titles, I selected 100 articles randomly from the sample and distributed them among 10 participants: five women and five men. The participants were native speakers of Arabic who volunteered to participate in the study. I asked them to manually assign gender labels (male, female, both and neither) relying on courtesy and professional titles.

To minimise participant bias, the distribution of articles was done in two steps. First, I distributed copies of the 100 articles among the five female participants equally (20 articles each) and asked them to label them according to the aforementioned four gender

labels. Second, I distributed the same number of articles equally among the five male participants. Consequently, each article was annotated twice to enhance the quality of the results. The findings of the manual annotation show an average agreement between male and female participants of 94%.

After the manual annotation, the automatic annotation was run on the same 100 articles to check for consistency. Only five automatically annotated articles (5%) did not agree with the manually annotated ones. The accuracy levels of the manual and automated annotation were 94% and 95%, respectively, which indicates that the latter was very reliable. As shown in Figure 3, the chart shows a positive correlation between manual and automated annotations: as manual counts increase, automated counts also tend to increase.

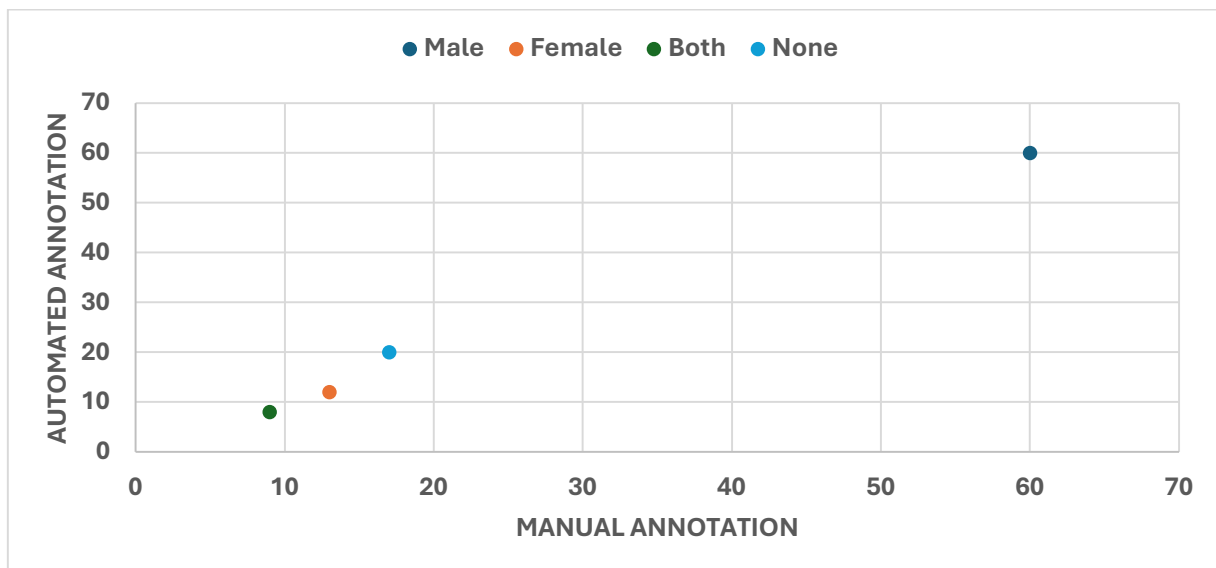


Figure 3 Scatter plot showing the correlation between manual and automated annotation

A single-gender article was categorised as either male-dominant or female-dominant. The articles that mentioned the two genders almost equally (e.g., 50% men and 50% women, or 60% women and 40% men) were labelled “both”. The articles that primarily mentioned male gender (65% men and 35% women) were labelled “male-

dominant” and vice versa. In other words, what determined the gender of an article was the prevailing gender characterisation found in it.

Preparing the Data: Pre-processing

To enhance the accuracy of the LDA and extract gender information, the sample went through several preparation steps. Arabic words have different classes (present, past or future; singular or plural; feminine or masculine; etc.). For example, the word رئيس (male president) can also be written as رئيسة (female president) or رؤساء (group of presidents). Although LDA can be run without modifications, pre-processing is an essential step for topic modelling because it makes the topics sharper and more reliable as the vocabulary becomes more precise and carries more meaning (Maier et al., 2018). Hence, pre-processing is definitely required for morphologically rich languages such as Arabic. According to Denny and Spirling (2017), pre-processing impacts the reliability, interpretability and validity of topic models. Accordingly, in the present study, the first step was to prepare the input material for the LDA. Farasa tools were used to clean and normalise the text, such as lemmatisation, segmentation, NER and parsing through either web API or Java archive files. Compared to other pre-processing tools, the primary advantage of using Farasa is speed without loss of accuracy (Mubarak, 2016). Thus, for better analysis and results, the pre-processing steps detailed below were taken.

Removing Stop Words

One of the data preparation steps was removing stop words. In most quantitative analysis methods, the importance of words in a given text differs substantially; not all words are equally relevant to the meaning of the text. Specifically, the frequent use of non-informative words can lead to rather uniform assignments of topics to most texts,

mainly consisting of common words without specific information (Roberts et al., 2013). Removing non-selective and common function words (i.e., stop words), such as prepositions, pronouns and articles, improves the functionality and efficiency of text mining algorithms. There is no agreement on which words are stop words, but there are different approaches to identifying them. One is to use the Natural Language Toolkit (Zain et al.,2020). However, in the present study, the use of this tool was not effective as many stop words were not eliminated, which led to the inclusion of topics consisting of common words without specific information. Thus, another approach was employed, which relied on ready-made lists. Scholars conducting text analysis often share their stop words by uploading them to websites for open-source software; for example, GitHub contains 750 Arabic stop words removed as the most common words from texts. Usually, courtesy titles (Ms and Mr) are considered stop words; however, here, they will not be excluded because they assist in the identification of the gender of the leading human subjects in the articles.

Unit of Analysis

The corpus is the collection of text documents to be analysed; a text corpus is a body of text in which each paragraph comprises several sentences. Sentences in English and Arabic differ in terms of structure. Ethelb (2019) found that in Arabic, it is not unusual to find sections consisting of one long sentence and that journalistic texts usually contain unnecessarily long paragraphs with as little punctuation as possible. In contrast to English, it is not uncommon in Arabic to find an entire text (e.g., a news article) consisting of a single paragraph. An important decision in topic modelling is the nature of the text document unit. Due to the structure of the Arabic language, the unit of analysis in this study is an article.

Chapter 4

Representation of Gender in Qatari Newspaper: An Overview

This chapter presents the results of the statistical analysis, focusing on descriptive statistics for the study variables, offering insights into gender representation in Qatari news articles from 2013 to 2021. It provides an overview of gender representation in news articles in the state of Qatar. Additionally, it discusses the LDA top-weighted topics and word distribution. The chapter also includes yearly counts of articles based on the dominant gender and examines gender prominence across various article topics.

LDA results

The LDA generated 40 top-weighted topics and their word distribution found on Al Raya newspaper articles as shown in Table 1. below. The topics are diverse, covering various aspects of life, including family, religion, education, and human rights. Several topics delve into regional political issues, such as the Israel-Palestine Crisis, the Qatar-Gulf crisis (siege), and the Arab Spring. Additionally, the dataset includes topics related to sporting events like the FIFA World Cup, Qatar League, and Europa League, as well as social and cultural activities.

To streamline the discussion and prevent redundancy, I re-aggregated the 40 topics into 15 broader categories. As shown in Table 1., these categories encompass Political Crisis, Health Crisis, Sport, Diplomatic Relations, Religion, Labor Market, Economic and Investments, Social and Cultural Activities, Crimes, Municipal and Environmental Services, Family, Human Rights, Information and Communication Technology, Education, and Others. This re-aggregation facilitates a more focused and organized analysis of the topics covered in the Al Raya newspaper articles.

Table 1 Top-weighted topics and word distribution

Topic	Sub-topic	Top 10 highest Weighted Words
Political Crises	Qatar-Gulf crisis (siege)	State, Qatar, Siege, Arabic, Saudi, Bahrain, Emirate, Kuwait, Crisis, Gulf ³
	Arab Spring	President, Politician, Government, Demonstration, Election, Party (political), Egypt, Coup ⁴ , Sudan, Revolution
	Militarization in Iraq and Yemen	Military, Iraq, Group (organization), Militias, Yemen, Armed, Tribal, ISIS ⁵ , Hothi ⁶ , army
	Israel-Palestine Crisis	Palestin, Colonialism, Gaza, Israel, Quds, Strip, Land, War, Captive, Settler (Occupiers)

³ The Arabian Gulf

⁴ Overthrow of a regime

⁵ ISIS claims responsibility for kabul airport bombing

⁶ Military Coup government

	Syrian civil war	[Syrian, Regime, Lebanon, Opposition, Assad ⁷ , Damascus ⁸ , Beirut ⁹ , Zone, Arm (Weapon), Aleppo ¹⁰
Health Crises	Health	Hygienic, Medical, Disease, Patient, Unwell (Sick), Health, Case (Medical), Healthcare, Treatment, Hospital, Remedy
	Covid-19	Virus, Coronavirus Disease, Covid-19, Dose, Precaution, Infection, Pandemic, Traveler, Vaccine, Epidemic
Sport	FIFA world cup	Championship, Team, Mondial, Football, Cup (World Cup), Qatar, World, Stadium, Competition, Player (Athlete)
	Qatar League	Al-Ssad ¹¹ , Credit, Al-Duhail ¹² , A Draw, Al-Gharrafa ¹³ , Goal, Forward, Shot, Kicks, Shoot
	Europa League	Sports club, League, Team, Season, Player (athlete), Coach, Ball, Spanish, English
	Birds hunting sports	Prize, Competition, Festival, Winner, Falcon, Arbitration, Contestant, 'Miqnas' Hunting ¹⁴ , Saqqar ¹⁵ , Qalayel ¹⁶
	Horse racing sports	Racing, Jockey, Horse, Steed, Equestrian, Shaqab ¹⁷ , Track, Crossbreed, Congratulations, Telegram
Diplomatise relations	Diplomacy	Excellency, Minister, Delegation, Presidency, Council, Ambassador, Relation, Republic, Cooperation
	Qatari leadership	Highness, Prince, Redempted, Homeland, Honorable, Prudent, Loyalty, Pride, Cohesion
	International relations	American, State, President, United, Turkey, Minister, Russia, Foreign Affairs, Washington, Agreement
Religion	Religion	Allah Almighty ¹⁸ , Muslim, Aya ¹⁹ , Worship, Zakat ²⁰ , Prayer, Religion, Prophit ²¹ , Qur'an ²² , Mosque ²³

⁷ President of The Syrian Regime

⁸ Capital of Syria

⁹ Capital of Lebanon

¹⁰ Economic Capital of Syria

¹¹ A sports club in the State of Qatar

¹² A sports club in the State of Qatar

¹³ A sports club in the State of Qatar

¹⁴ Using hunting birds

¹⁵ A trainer of hunting birds (falcons)

¹⁶ A sports championship held yearly in Qatar where contestants compete to hunt using their hunting birds like falcons

¹⁷ The equestrian club in Qatar

¹⁸ The Only God worshiped in Islam

¹⁹ A verse from the Qur'an-the Holy Book of Muslims

²⁰ is an Islamic finance term referring to the obligation that an individual has to donate a certain proportion of wealth each year to charitable causes.

²¹ Prophit Muhammad BPUH-the last Messenger sent by Allah to people to call them to embrace the Islamic Doctrine

²² the Holy Book of Muslims inspired by Allah Almighty to His Messenger

²³ Muslims' place for worship

	Emotional issues	Penance, Death, Died, Thought, Sadness, Lie, Envy, Fear, Conscience, Ignorance
Labour market	Regulations and laws	Law, Labour, Ministry, Committee, Slate, Procedure, Decision, License, Salary, Expatriate ²⁴
	Human Development	Program, Empirical, Skill, Training, Vocational, Institute, Researching, 'Development', Qualifying, Academy
	Work Market issues	Order, Negativity, Duty, Problem, Ideology, Time, Monopoly, Inventor, Logical
Economic and investments	Petroleum	Oil, Price, Natural Gas. Production, Report, Barrel (Fuel Barrel), Anticipation, Petrol
	Banking	Bank, Stock, Index, Trading, Stock Market, Profit, Bank, Currency, Percentage
	Entrepreneur investments	Company, Investment, Commercial, Trade, Economy, Kahramaa ²⁵ , Qatargas ²⁶ , Sector, Delegate, Strategic
	Air and sea freight	Plane, Aerial, Journey, Airport, Maritime, Aviation, Itinerary, Ship, Sea, Harbour
Social and cultural activities	Entertainment	Visitor, Eid ²⁷ , Touristic, Offer, City, Tourist, Hotel, Resort, Park, Beach
	Culture activities	Art, Cultural, Fair, Book, Museum, Tradition, Library, Plastic Art, Poet, Katara ²⁸
	Social activities	Event, Awareness, Activity, Participation, Youth, Community, Educational, Broadcaster, Program, Debate
	Media and art	Film, Theatre, Play, Song, Television, Radio, Cinema, Drama, Series, Scenes
	Charitable work	Charity, Refugee, Relief, Crescent ²⁹ , Donation, Displaced ³⁰ , Needy, Orphan, Lodging, Donor
Crimes	Addressing Violence	Police, Explosion, Death, Murder, Fire, Bomb, Detonation, Attack, Death, Suicidal
	Courts and cases	Court, Crime, Case (law), Accusation (indictment), Imprisonment, Right, Indicted, Detainee, Investigation, Adjudication
Municipal and Environment services	Environment	Environment, Water, Product, Production, Plant, Tree, Agricultural, Agriculture, Environmental, Nature Reserve
	Maintenance and infrastructure work	Area, Automobile, Street, Project, Labour, Municipality, Traffic, Residential, Building

²⁴ People living in another country-Gulf countries-with work residency permit

²⁵ Company responsible of electricity and water provision in Qatar

²⁶ Company responsible of gas extraction in Qatar

²⁷ A religious ceremony/Feast.

²⁸ A Cultural Village in the State of Qatar

²⁹ Qatar's first volunteering charitable organization

³⁰ Citizens obliged to leave their houses because of war or other crisis

	Commercial activities	Consumer, Halal ³¹ , Manor, Merchant, Fish, Buyer, Customs, Inspection, Auction, Sheep
Family	Family	Child, Family, Woman, Life, Husband, Father, Home, Work, Age, Mother
Human rights	Human rights	State, International, Right, Arab, Nation, United, Organization, Security, Human, Cause
Information and Communication Technology	Information and Communication Technology	Electronic, Internet, Customer, Telephone, Smart, Digital, Mail, Ooredoo ³² , Connection, Device, Usage
Education	Education	Student, School, Education, University, College, Teacher, Examination, Study, Scholastic, Research
Others	The "ASEAN Plus Three"	China, India, African, Korean, Australian, Nigeria, Shanghai, Beijing, Azerbaijan, Country
	Europe and emigration	European, German, British, France, Berlin, Germany, Host, Union, Europe, Emigrant

Validation

The main aim of this research is to compare the representation of men and women in newspaper articles. To focus on each gender category, articles featuring both men and women—or neither— will be excluded from the analysis. A logistic regression model will be used to test the significance of gender expression, as it is appropriate when the dependent variable is categorical. It applies a logistic (sigmoid) function to transform a linear combination of independent variables into a probability value between 0 and 1. This probabilistic output is highly interpretable, offering valuable insights into the likelihood of specific gender expressions based on various predictor variables. The logistic regression analysis in Table 2, with the dependent variable coded as 1 for male and 0 for female, provides robust statistical evidence of a significant and entrenched overall gender bias in media representation within the studied newspaper articles.

³¹ Edible according to the Islamic religion

³² Telecom company in Qatar

Table 2. Logistic regression testing the significance of gender expression

		Variables in the Equation					
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Topic=Crims and cases	0.739	0.152	23.563	1	0.000	2.095
	Topic=Diplomatises rel	2.847	0.177	259.405	1	0.000	17.234
	Topic=Economic and inv	0.917	0.150	37.332	1	0.000	2.503
	Topic=Education	0.953	0.184	26.789	1	0.000	2.593
	Topic=Family	-1.508	0.197	58.720	1	0.000	0.221
	Topic=Health issues	0.013	0.152	0.007	1	0.931	1.013
	Topic=Human rights	1.101	0.166	43.832	1	0.000	3.008
	Topic=Information and	0.488	0.188	6.737	1	0.009	1.629
	Topic=Labour market	0.667	0.150	19.746	1	0.000	1.947
	Topic=Municipal and En	0.529	0.160	10.903	1	0.001	1.697
	Topic=Political issues	1.249	0.152	67.639	1	0.000	3.489
	Topic=Religion	0.857	0.159	29.217	1	0.000	2.356
	Topic=Social and cultural	0.486	0.146	11.043	1	0.001	1.626
	Topic=Sport	1.769	0.153	134.096	1	0.000	5.864
	Constant	1.272	0.140	82.197	1	0.000	3.569

a. Variable(s) entered on step 1: Topic=Crims and cases, Topic=Diplomatises rel, Topic=Economic and inv, Topic=Education, Topic=Family, Topic=Health issues, Topic=Human rights, Topic=Information and, Topic=Labour market, Topic=Municipal and En, Topic=Political issues, Topic=Religion, Topic=Social and cultural, Topic=Sport.

Note: * Sig. < 0.05

Table 2. Logistic regression model demonstrates that the topic of an article is a powerful and statistically significant predictor of whether a male or female figure will be featured, revealing a systematic pattern of gendered visibility. The consistently high positive coefficients and odds ratios ($\text{Exp}(B) > 1$) across a range of public-facing domains — diplomatic relations ($\text{Exp}(B) = 17.234$), sport ($\text{Exp}(B) = 5.864$), political issues ($\text{Exp}(B) = 3.489$), economic and investment ($\text{Exp}(B) = 2.503$), and education (implied positive coefficient) — unequivocally indicate that men are overwhelmingly more likely to be represented in these high-status, public spheres of media coverage. For instance, an article about diplomatic relations is over 17 times more likely to feature a male figure than a female figure, compared to the reference category (which is implicitly the base for these comparisons, usually an omitted topic or the intercept).

Conversely, the "family" topic emerges as the *sole* category significantly associated with female representation ($\text{Exp}(B) = 0.221$). An odds ratio below 1 signifies that articles in this category are significantly *less* likely to feature a male figure (and thus, more likely to feature a female figure), compared to the reference. This stark contrast—numerous male-dominated public categories versus a single female-associated domestic category—underscores a deeply ingrained gendered division of media labor, where men are positioned as the primary actors in the public domain, while women's visibility remains largely confined to traditionally private-sphere narratives. The finding for "health issues" showing no significant association is a notable exception, suggesting a more balanced, or perhaps less explicitly gendered, representation in this specific domain, which could warrant further qualitative investigation.

In essence, the logistic regression quantifies and validates the existence of systemic media bias, illustrating how media discourse actively constructs and reinforces conventional gender roles by granting disproportionate visibility to men in positions of power, influence, and public interest, while sidelining women into stereotypical domestic roles. This is a clear demonstration of how media representation contributes to and reflects broader societal gender inequalities.

The Representation of Gender in Qatari News Articles from 2013 to 2021

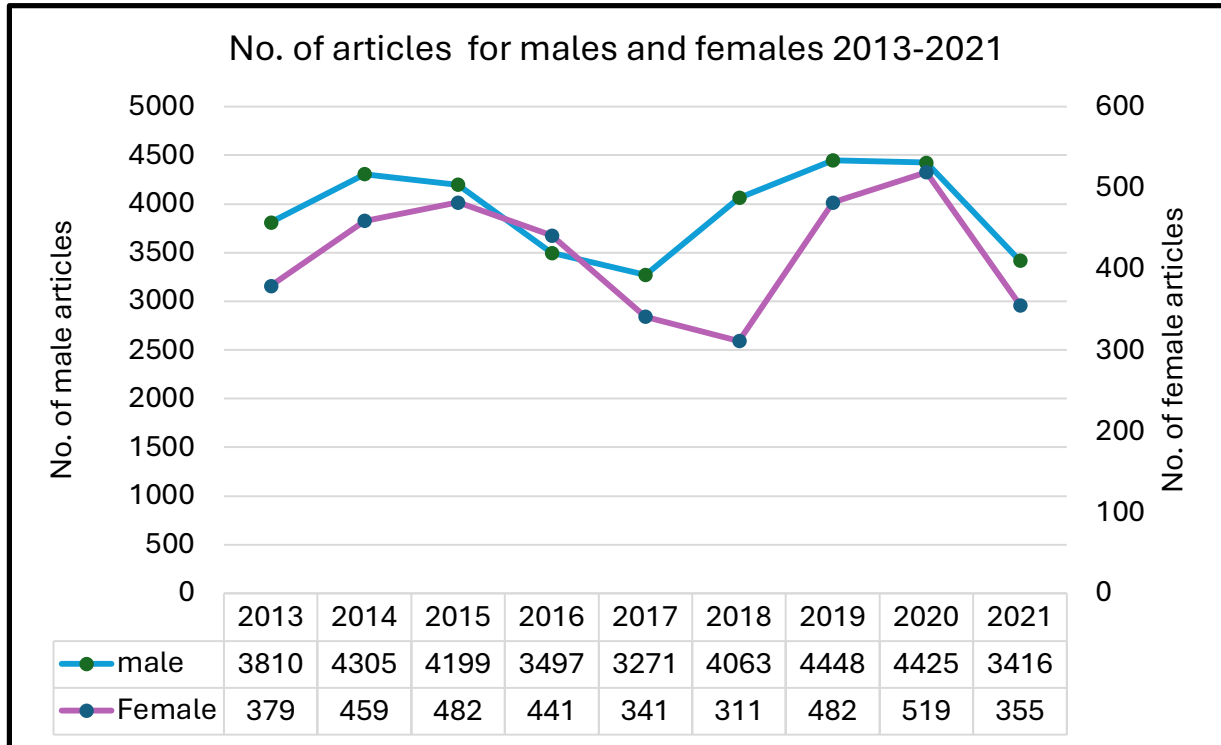


Figure 4 Yearly Counts of Articles According to the Dominant Gender

For decades, much feminist media research has proven that there is a consistent pattern of underrepresentation of women in relation to men in the news media (Armstrong, 2004; Collins, 2011; Matud et al., 2011; Jia et al., 2016; Aznar, 2017). This is confirmed by the results of the present study, which revealed that men have been overrepresented compared to women in the articles of the newspaper *Al Raya* over the years analysed. Figure 4 shows the number of articles per year in which the dominant character is male or female between January 2013 and December 2021. The yearly number of articles whose dominant character is male is roughly 6–8 times (on average) greater than that of the articles in which the dominant character is female. In Qatar, there are now many progressive and independent women, as well as a growing movement for gender equality, which is marked by women’s increased participation in public life, particularly in higher

education. Qatari women consistently outnumber and outperform men academically (Ridge, 2014). These educational gains have translated into increased economic participation of women at 37.6% in 2019 (Planning and Statistics Authority, 2020). However, this rate remains significantly lower than that of men, which stands at 67.9% (Planning and Statistics Authority, 2020). As a result, men are more frequently involved in politics and public life than women, which probably contributes to their overrepresentation in news articles. Since men hold more positions of power and influence, they are more frequently featured in the media, where women's perspectives, contributions and voices are underrepresented.

Gender Frequency Across Topic

In addition to demonstrating the underrepresentation of women in media news, the present study provides detailed information about the domains in which men and women are more or less represented. For each topic, I calculated the frequencies of an article being classified as male-dominant or female-dominant characters to investigate how the balance of males and females featured in the news might change by topic. I found that the gender balance in the newspaper articles differed across topics.

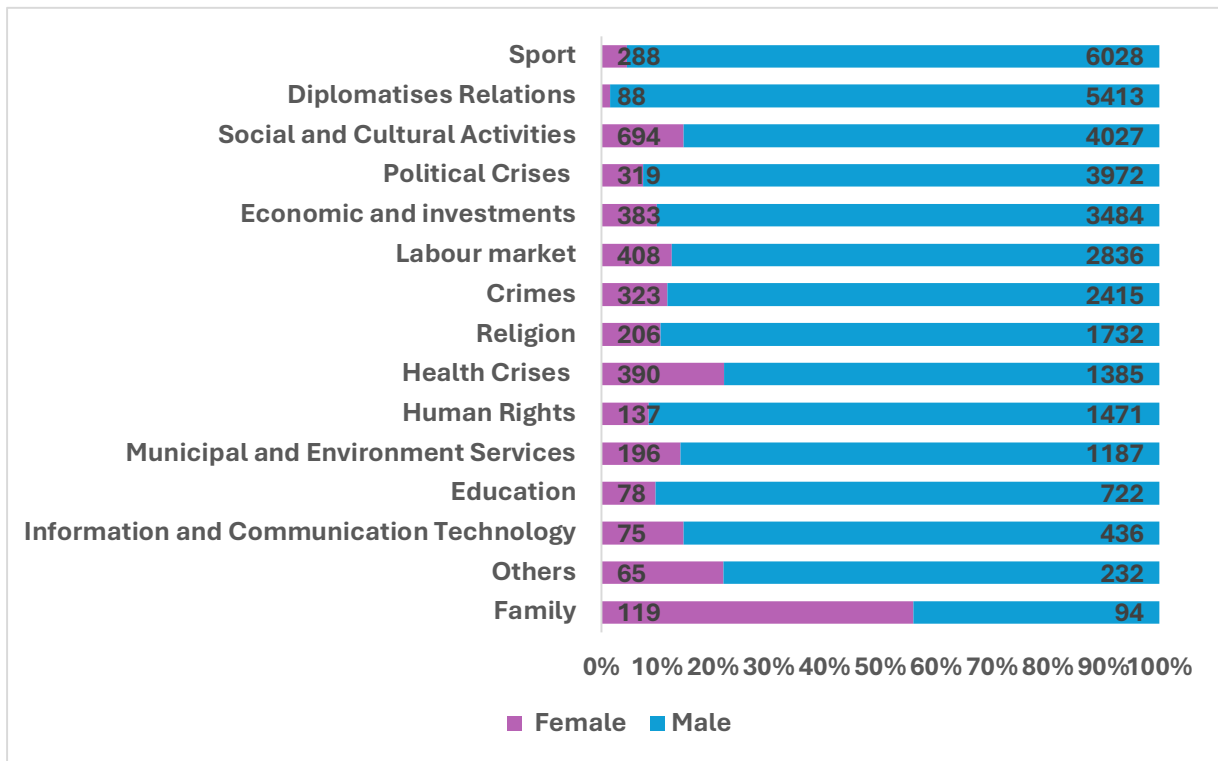


Figure 5 Gender Frequency (by number of articles) Across Topics

Figure 5 shows the number of articles per topic category in each gender group (female- or male-dominant character). Overall, men’s representation was higher than women’s across all the topic categories; the only topic in which women were represented more than men was family, with 119 articles mentioning females and 94 articles mentioning males. The family topic is female-dominant because it regularly features mothers involved in childcare and household activities.

In sports, diplomatic relations, social and cultural activities, political crises, economic investments and the labour market, men were represented more than women (with 6,028, 5,413, 4,027, 3,972, 3,484 and 2,836 articles, respectively). This confirms previous studies, which found that men were more likely to be represented as soldiers, athletes or businessmen and were present more frequently in topics such as sports,

politics and business (Matud et al., 2011; Jia et al., 2016; Rao and Taboada, 2021; Mamasodikova and Ergasheva, 2022).

There are many articles published in Al Raya about social and cultural activities than about family. Although articles primarily focusing on women are a much smaller proportion of the 'social and cultural activities' than the proportion of 'family' articles focusing on women, 'social and cultural activities' articles are, nevertheless, the largest group of articles in which women are prominent figures. The highest female prominence in social and cultural activities (694 articles), followed by labour market (408 articles); however, the lowest prominence is in information and communication (75 articles) and others (65 articles).

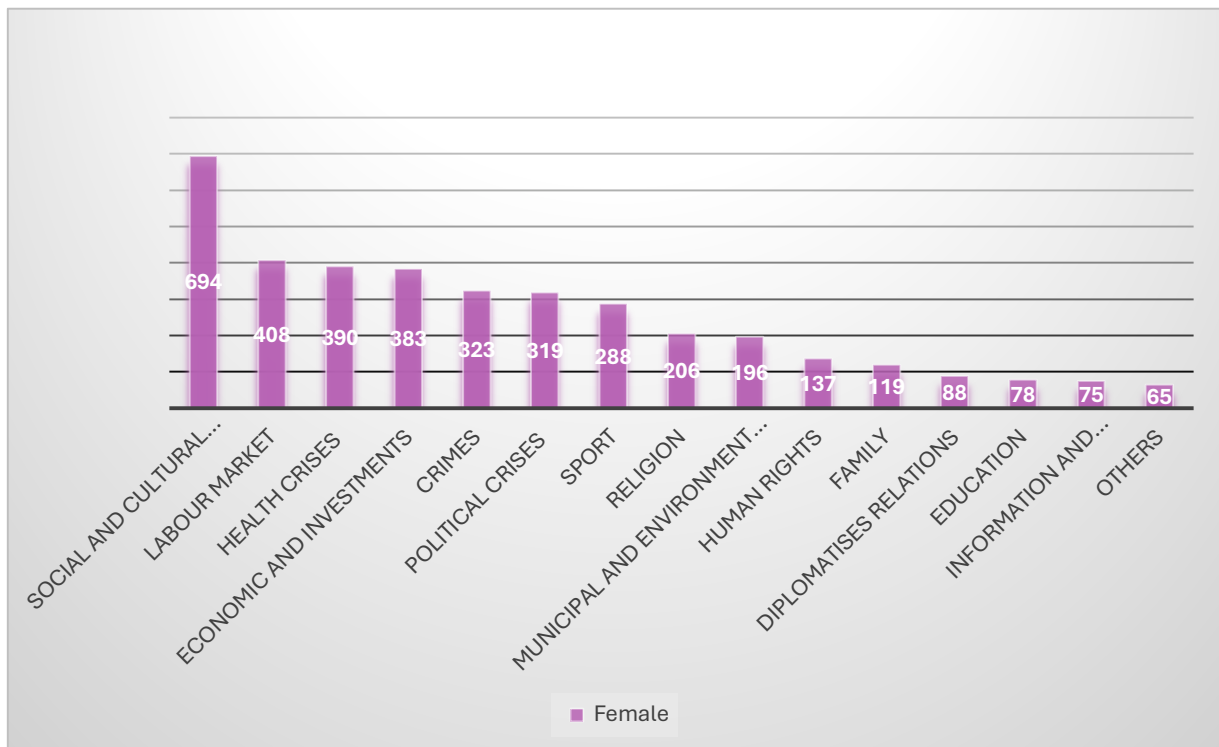


Figure 6 Female Frequency across Topics

Compared to men, as shown in Figure 5 above, women made up 55% of articles on family topics, 22% of articles on health issues and 15% on social and cultural activities.

Vandenberghe (2019) found that the news media focused more on feminine issues, women's role models and appearances, the role women play in the family and topics that displayed strong female prominence in art, entertainment, lifestyle and healthcare (Rao and Taboada, 2021; Mamasodikova and Ergasheva, 2022). It is clear that gender roles in the news media are linked to stereotypical representations of traditional roles (Mahmoud et al., 2012; Kumari and Joshi, 2015; Gurung, 2016). Despite having the possibility to resist such gender stereotypes, media contributes to strengthening traditional roles.

Yearly Gender Frequency Across Topics

The topics were categorised into three main groups based on the frequency of reporting from 2013 to 2021. The first group includes the five most common topics: economics and investments, political crisis, social and cultural activities, diplomatic relations and sports. The second group comprises five moderately common topics: human rights, health crisis, religion, crime and the labour market. The third group features the five least common topics: family, information and communication technology, education, municipal and environmental services, and others. Choosing the same topics to compare the number of articles for each gender across years as shown in Figures 7-12³³ below allowed for a focused analysis of gender representation within specific areas, leading to a deeper understanding of how men and women are portrayed in different contexts. By comparing the representation of men and women within each topic, the study can reveal potential biases that may exist in media coverage.

³³ For easy reading and understanding of the male and female graphs below, it is worth mentioning that the graphs may look visually similar in terms of the peaks and troughs; however, there are not considering the number of articles mentioned each year for male and female.

One of the significant changes in Qatar in June 2013, Sheikh Tamim bin Hamad Al Thani became Emir of Qatar after Sheikh Hamad bin Khalifa Al Thani abdicated the throne. Qatar continues to invest in sports, culture, and sustainable development projects. The figures below illustrate the representation of men and women over time, allowing for evaluating the impact of such events on women's visibility and voices in newspaper articles.

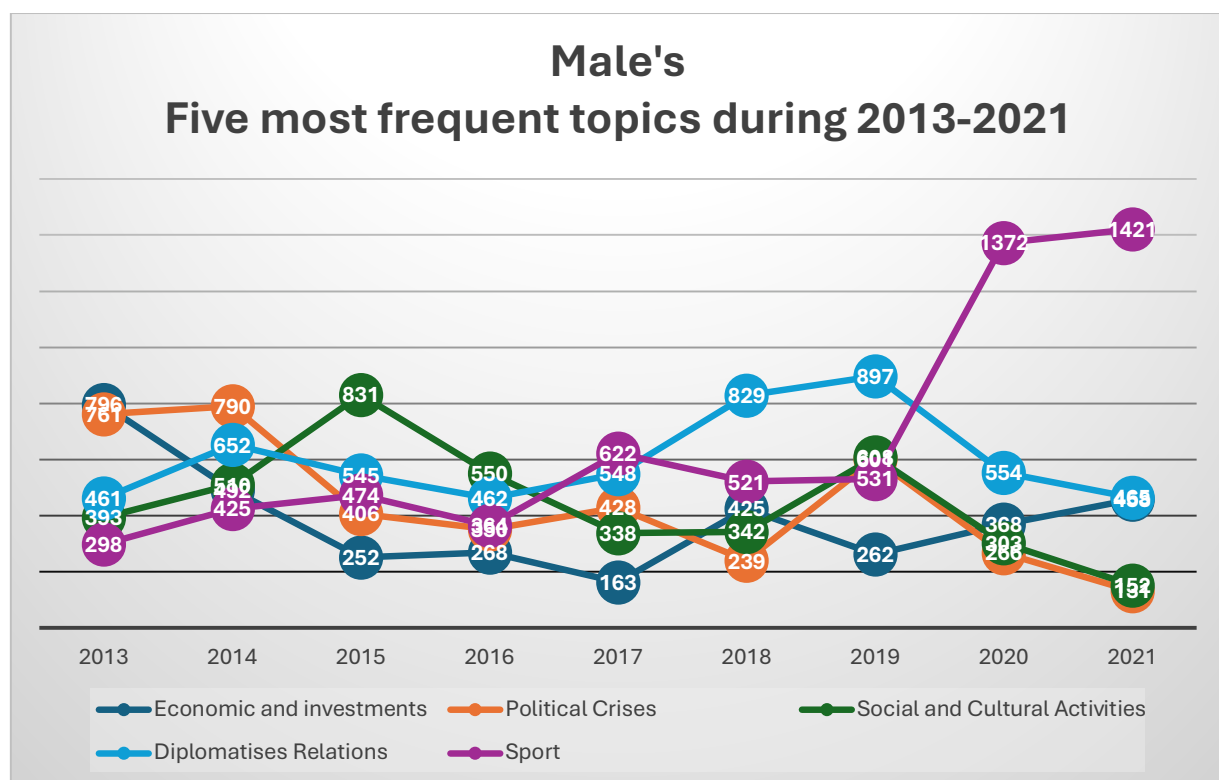


Figure 7 The Five Most Frequent Topics for Males from 2013 to 2021

Figure 7 shows the frequencies of the five most prevalent topics featuring male-dominant characters from 2013 to 2021. Sports is one of the most frequently discussed topics during the specified period. The number of articles featuring male characters in sports gradually increased over the years, with a slight decline in 2016 and 2018. Towards

the end of the period, sports topics experienced a significant rise, culminating in a major peak in 2020, with 1,372 articles, which increased further in 2021 to 1,421 articles. In December 2010, Qatar was awarded the right to host 2022 FIFA World Cup as the first Middle Eastern country. This announcement marks the beginning of significant infrastructure and development projects frequently covered in the newspaper, including the construction of new stadiums, transportation network, and facilities. In another sporting event in January 2019, Qatar hosted the AFC Asian Cup, marking a significant achievement in sports. In November 2021, Qatar hosted the FIFA Arab Cup as a precursor to the World Cup. As the date for hosting the World Cup drew nearer, sporting events led to a noticeable increase in news coverage.

Notably, the number of articles on diplomatic relations experienced significant peaks in 2018, with 829 articles, followed by another increase in 2019, which recorded 897 articles. Furthermore, the topic of political crises saw high frequencies in 2013 and 2014, with 787 and 790 articles, respectively. In March 2014, a diplomatic rift involving the withdrawal of ambassadors from Qatar by Saudi Arabia, the UAE, and Bahrain, accusing it of supporting extremist groups. The number of articles on political crises declined over the years, with low points in 2020 (266 articles) and 2021 (131 articles), but there was a slight increase in 2017 (428 articles) and 2019 (601 articles). In June 2017, the Qatar-Gulf Crisis began as Saudi Arabia, the UAE, Bahrain, and Egypt imposed a blockade and embargo on Qatar, severing diplomatic and trade ties. In December 2017, Qatar introduced new laws and policies to strengthen self-reliance, diversify its economy, and mitigate the effects of the blockade (Antoniades, 2022). In January 2021, the Al-Ula

Declaration was signed to restore diplomatic relations between Qatar and Saudi Arabia, as well as the UAE, Bahrain, and Egypt.

The number of male-dominant articles on economics and investments fluctuated over the years. Starting with 796 articles in 2023, the total experienced a continuous decline. However, there was an increase between 2018 and 2021, which reached around 400 articles, despite a slight drop in 2019, when the count fell to 262 articles. Social and cultural activities peaked in 2015, then fluctuated downwards, reaching a low of 152 mentions in 2021.

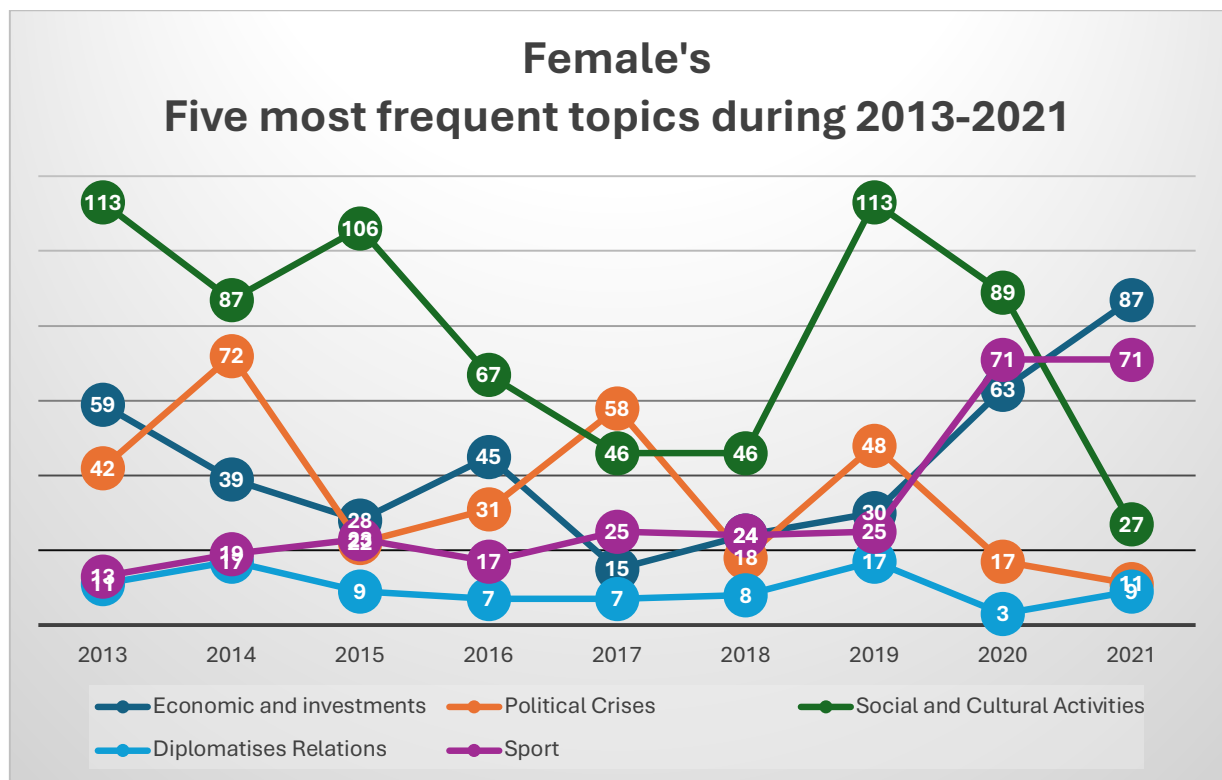


Figure 8 The Five Most Frequent Topics for Females from 2013 to 2021

Regarding women, the most frequent topic was social and cultural activities (Figure 8). The number articles reach peaked in 2013 and 2019, with 113 articles published in

each of those years. However, the number of articles declined in the following years, dropping to its lowest point in 2021, with only 27 articles with female-dominant characters. The number of articles on political crises topic fluctuated over the years, with notable peaks in 2014 and 2017 (72 and 58 articles, respectively) due to the Qatar diplomatic crisis in 2014 and the Qatar-Gulf crisis in 2017. In 2019, the number of articles increased to 48 with the appointment of Lolwah Al-Khater as the first female spokesperson for the Ministry of Foreign Affairs. In 2020 and 2021, the number of articles experienced a sharp decline to 17 and 11 articles respectively.

The number of female-dominant articles on economics and investments also underwent fluctuations, but there was a noticeable increase in articles published in 2013, 2016, 2020 and 2021. The highest peaks occurred in 2020 and 2021, with 63 and 87 articles, respectively. In contrast, the number of articles on this topic dropped to its lowest point in 2017, where only 15 articles featured women as dominant characters. The number of articles on sports increased gradually, with significant spikes in 2020 and 2021 (71 articles for both years) due to sporting events such as the preparation for the 2022 FIFA World Cup, AFC Asian Cup and FIFA Arab Cup. The number of articles on diplomatic relations consistently exhibited a low frequency over the years, without notable spikes. There was a slight peak in 2019 when 17 articles were published, but this figure is low compared to the other topics.

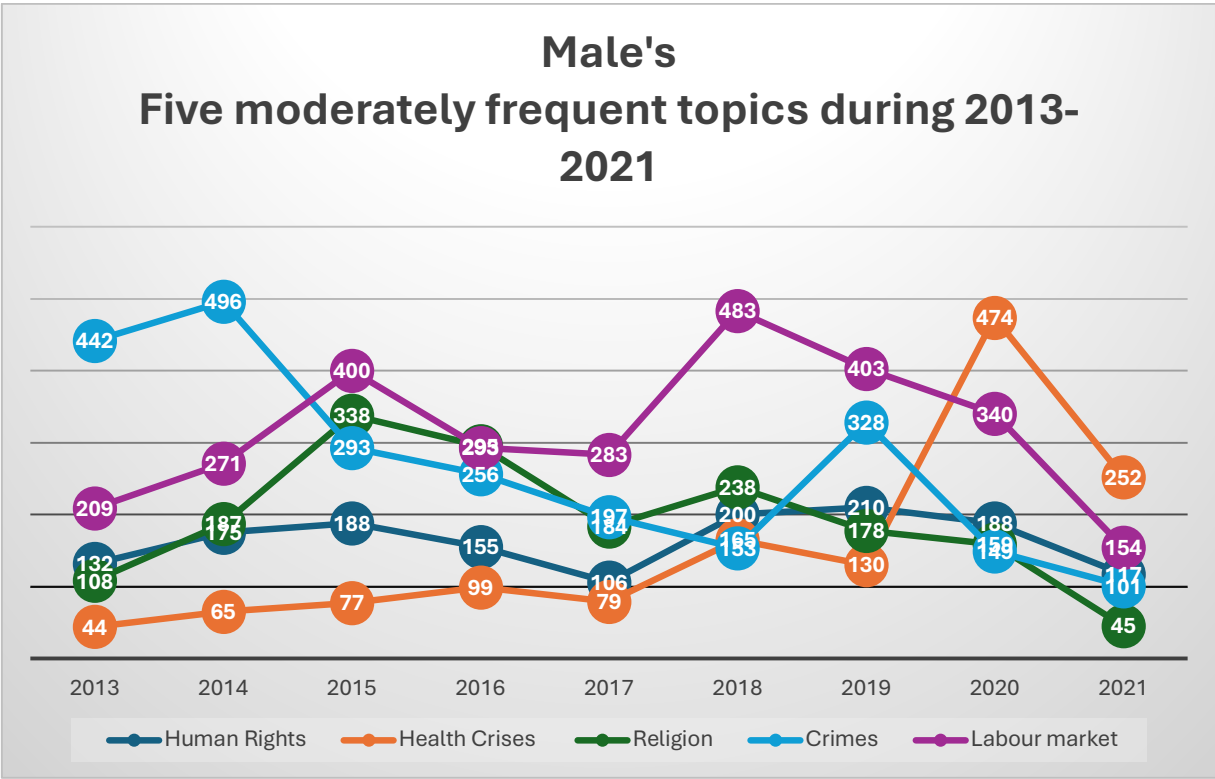


Figure 9 Male's Five Moderately Frequent Topics During 2013-2021

The five moderately frequent topics featuring male characters as the dominant figures are depicted in Figure 9, which covers the period from 2013 to 2021. Overall, there is a declining trend observed over the years, particularly in recent years, with a significant decrease noted from 2020 to 2021 across all topics. Except in the health crisis, the number of articles on this topic was generally low over the years compared to other subjects. In 2020, the number of articles skyrocketed to 474; however, they dropped to 252 in 2021. Despite the drop in the number of articles in 2021, they remain higher than the levels seen before 2019. At the end of February 2020, Qatar confirmed its first case of COVID-19. In March 2020, nationwide social distancing measures were implemented, which included school closures, work-from-home policies, and travel restrictions. By July

2020, a phased approach to easing COVID-19 restrictions began, although health measures continued to remain in place (Al-Mohannadi et al., 2024).

Additionally, the number of articles in the labour market fluctuated over the years, peaking in 2015 with 400 articles and again in 2019 with 483 articles. However, there was a general decline in the number of articles through 2021, reaching a low of 154. In Crimes, the number of articles experienced a notable increase, rising from 442 in 2013 to a peak of 496 in 2014. However, the number of articles declined in the following years, with a sharp increase in 2019, reaching 328. The number of articles on religion has varied over the years. There was a gradual increase from 2013 to 2015, peaking at 338 articles. This was followed by a decline in articles, with only a slight increase observed in 2018 at 238. The number of articles on human rights has remained relatively stable over the years. There was a decrease in 2017, with 106 articles, followed by a significant increase in 2018 and 2019, with 200 and 210 articles, respectively.

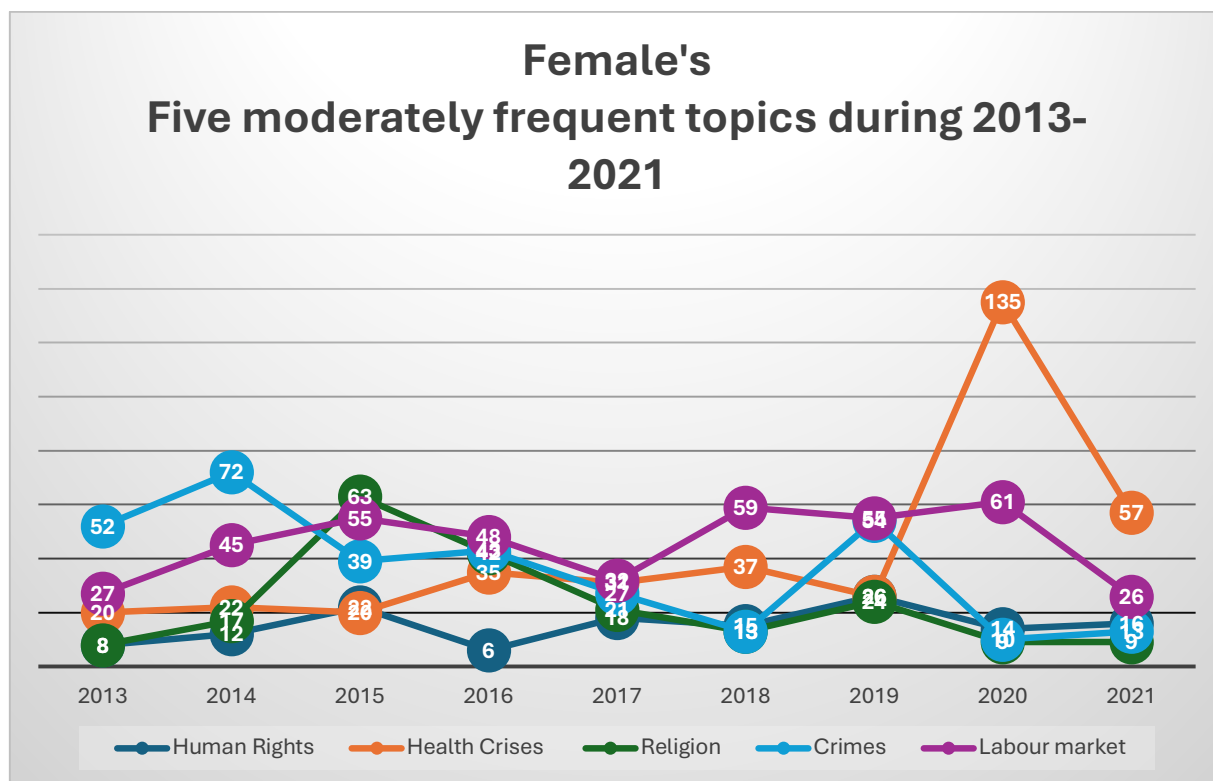


Figure 10 The Five Moderately Frequent Topics for Females from 2013 to 2021

Figure 10 illustrates the five moderately frequent topics dominated by female characters from 2013 to 2021. Overall, the number of articles on topics such as human rights, religion and crime decreased significantly from 2020 to 2021. In contrast, news articles covering the health crisis were relatively few from 2013 to 2019. In 2016, the number of articles increased to 35, and in the same year Dr. Hanan Mohammed Al Kuwari (female) was appointed Minister of Public Health of the State of Qatar. The year 2020 witnessed dramatic rise in health-related articles, peaking at 135 due to the COVID-19 pandemic.

The number of articles on religion showed slight fluctuations but remained lower than that of the other topics, peaking at 63 articles in 2015. The topic of the labour market fluctuated but with a steady frequency; it underwent two notable drops in 2017 (32

articles) and 2021 (26 articles). The number of female-dominant articles on crime decreased over the years, except for a slight increase in 2014 and 2019, with 72 and 54 articles, respectively. The number of articles on human rights had a consistently low frequency compared to the other topics, with an average of 15 articles.

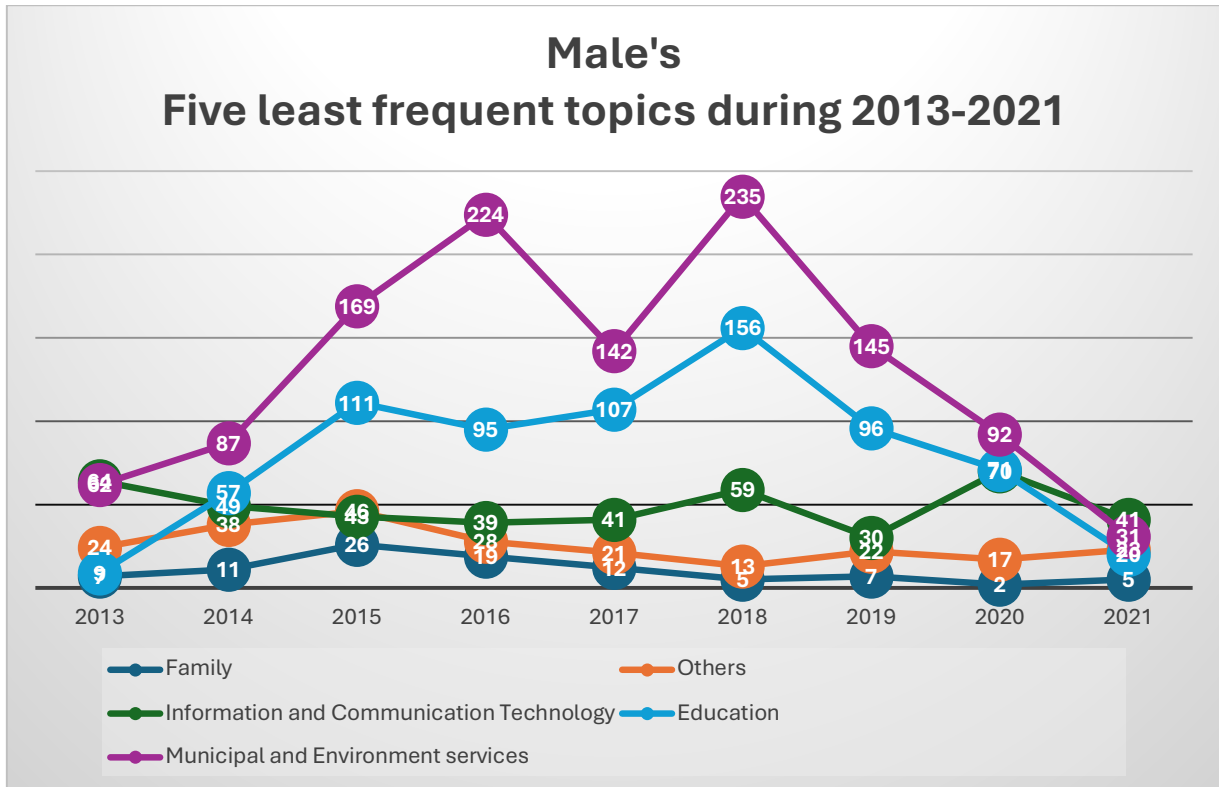


Figure 11 The Five Least Frequent Topics for Males from 2013 to 2021

Figure 11 shows the five least frequent topics where men dominated the characters of the news stories from 2013 to 2021. Overall, the number of male-dominant articles on of municipal and environmental services and education had more frequent fluctuations and higher peaks, especially in 2018. In contrast, information and communication technology and family had more stable, lower frequencies. The number of articles on municipal and environmental services increased over time, peaking at 224 articles in 2016 and 235 articles in 2018; in the following years, it dropped sharply, decreasing to 31

articles in 2021. The number of articles on education increased throughout the period of observation, peaking at 156 articles in 2018 and then decreasing significantly in the following years, reaching a low of 20 articles in 2021. Information and communication technology remained relatively low and stable compared to the other topics, with a significant rise in 2020 (70 articles). The topics of family and others had consistently low numbers of articles, with slight peaks in some years.

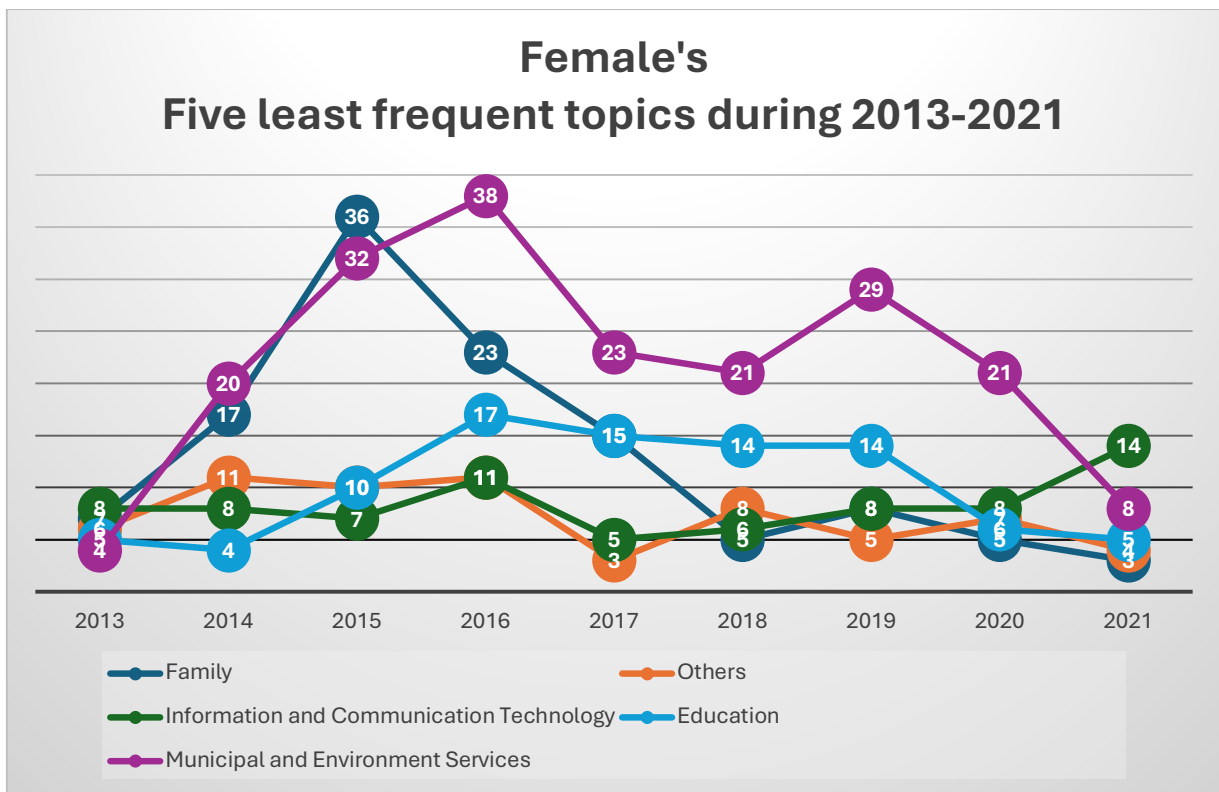


Figure 12 The Five Least Frequent Topics for Females from 2013 to 2021

Figure 12 illustrates the five least frequently discussed topics where women dominated the news story characters in the period 2013–2021. The number of female-dominant articles on municipal and environmental services had the highest peaks, but it declined sharply after 2019, reaching a low of 8 articles in 2021. The number of articles

on family topic had the highest frequency between 2014 and 2016, with a peak of 36 articles in 2015, but it had a decreasing trend in the remaining years. The number of articles on education significantly increased beginning in 2014 and remained stable in between 2018 and 2019, with an average of 14 articles; then, it dropped in 2020 and 2021. Information and communication technology consistently had a low number of articles, with minor fluctuations, peaking slightly in 2021 with 14 articles. The number of articles on others showed a steady low frequency throughout the years, without significant increases.

Overall, as shown in the Figures above, media coverage of men and women across different years indicates that the differences are not constant but fluctuate over time. These fluctuations can be attributed to two key factors: exogenous events such as natural disasters or man-made crises, against a backdrop of enduring structural biases within society that shape media representation. While specific events, such as political upheavals or wars, can temporarily alter the focus and portrayal of genders, underlying societal norms and structures consistently influence how genders are represented across all forms of media coverage. According to Sakr (2004), the media in the Middle East has the potential to empower women, but this potential is often restricted by existing power structures, political systems, and deeply rooted cultural norms. This dual influence highlights the complexity of gender dynamics in media, shaped by both immediate circumstances and long-standing societal biases.

These shifts confirm that real-world events and the underlying social structures they interact with affect the media representation of men and women differently. It is evident from the data analysis that political and health shocks have significantly

influenced the portrayal of gender in news media. These shifts in gender representation are a result of the rapid response measures that become necessary during times of crisis, as media outlets adapt to the evolving landscape. Gender representation increased during any political or health shocks in Qatar; for example, the representation of men in the media has shown significant fluctuations during various crises, illustrating how real-world events, such as Qatar-Gulf crisis in 2017 impact gender portrayal. The 2020 was a notable year with spikes across several topics; most likely, the global spread of COVID-19 in 2020 led to a marked increase in gender representation in news media especially in health crisis topic.

Increased visibility or inclusion of women in state-sanctioned roles, such as media appearances during a crisis, does not automatically lead to genuine empowerment or systemic change. In this context, state feminism is characterised by promoting women's participation within existing structures without addressing fundamental inequalities or challenging patriarchal norms. It often focuses on managing the "woman question" in a way that aligns with the state's broader agenda.

Fraser advocates for participatory parity, emphasising that while women may gain some visibility in media during crises, the lack of equitable participation in positions of power—both within media institutions and in society at large—prevents them from achieving true participatory parity. Although women's voices may be heard, their influence in shaping narratives or making decisions remains limited.

Chapter 5

Representation of Gender in Health and Political Crises

This chapter examines the impact of crises on gender representation in newspaper coverage by analysing how men and women are represented before and during a crisis. It includes a detailed analysis of newspaper articles during the COVID-19 health crisis from 2019 to 2021 and the Qatar–Gulf political crisis from 2016 to 2018.

The impact of crises on gender representation in newspapers

The previous chapter 4 provided an overview analysis of the representation of gender in newspaper articles in Qatar. The substantial dataset collected from Qatari newspaper articles provides a rich foundation for investigating gender roles and their representation during crises. According to Asr et al., “[t]opic-based analyses can help identify emerging topics, such as one-time events (sport events, political unrest) or new developments that stay in the news (COVID-19)” (2021, p.21). Qatar was economically, politically and socially stable between 2013 and 2021; however, it went through periods of instability caused by the Qatar–Gulf crisis in 2017 and the COVID-19 pandemic in 2020. These distinct events have had a substantive impact on the representation of gender and gender-related topics in the Qatari news. According to Karantonaki (2021), these challenging times can particularly illuminate the rigid frameworks of gender roles and expectations that shape our interactions and societal organisation. Therefore, during periods of crisis, societal issues and power dynamics often come to the forefront, creating an opportunity to analyse how gender is portrayed and represented. Due to unexpected changes in gender roles and relations during or after crises, gender inequality and discrimination tend to be exacerbated or alleviated, and the roles of men and women can be reshaped. Lafrenière et al. (2019) affirm that pre-existing gender inequality and discrimination create challenges for women during or after an emergency. The COVID-19 pandemic has revealed the struggles of women seeking empowerment, despite international empowerment efforts over the years (Fouad, 2023). Quantitative analysis of newspaper articles can elucidate how the representation of women and men in newspaper articles changed during these specific events. The analysis of newspaper

articles will show whether men are mentioned more frequently or given more space in news coverage of crises than women.

Crises often serve as a magnifying glass for societal structures, revealing and intensifying pre-existing inequalities. This phenomenon occurs because emergencies disrupt normal societal functions and safety nets, placing disproportionate burdens on certain groups. The disruption of normal societal functions and safety nets in times of crisis entails overwhelmed healthcare systems, school closures, and inaccessibility to social services. These disruptions impose additional burdens on specific groups: women often face increased caregiving responsibilities, low-income families experience greater economic instability, and racial and ethnic minorities encounter exacerbated health disparities. However, women experience crises differently than men (Hozic, 2016); they experience the toll of crises as refugees, victims of violence, caregivers and low-income and job losses during wars, pandemics or financial crises. For example, the COVID-19 crisis many countries exposed the magnitude of significant social challenges, including human trafficking, substance abuse and domestic violence, due to the pandemic's impact on civil society (Harris, 2021; Moghadam, 2021). Similarly, women in the MENA region have faced increased burdens, including higher unemployment rates, greater caregiving responsibilities, and heightened exposure to domestic violence (Moghadam, 2021; Usta et al., 2021; Abu-Elenin et al., 2022). United Nations Security Council Resolution 1325 (2000) recognises the disproportionate impact of war on women and girls, calls for their participation in peacebuilding and conflict resolution processes and calls for the protection of women and girls from violence and other human rights violations in conflict situations (Nduwimana, 2006). Thus, in situations of instability and crisis, women are the most

vulnerable and face disproportionate consequences. According to the United Nations (2020), women are among the most affected demographic groups in times of crisis, simply due to their sex (Lazzaro-Salazar and Zayts, 2021). The United Nations Office for the Coordination of Humanitarian Affairs emphasises the crucial importance of protecting women in armed conflicts and their central role in conflict prevention, peacekeeping and peacebuilding as a growing concern for the international community (Shirazi, 2010).

On the other hand, national movements and revolutions within the modern history of the MENA region have frequently involved women symbolically to display national strength and collective unity. Throughout the Algerian War of Independence between 1954–1962 women embodied dual roles as warriors and maternal figures which helped build a national identity that supported resistance efforts (Amrane, 1994). Women demonstrated publicly during Egypt's 1919 revolution to symbolize the moral integrity and unity of nationalist efforts (Baron, 2005). The Arab Spring Uprisings (2010–2012), women in Tunisia, Libya, Egypt, Yemen and Syria demonstrated their political strength by participating in demonstrations and took part in shaping the resistance movements in their countries (El-Husseini, 2016). According to Maghadam (1994), women's participation in political life is crucial for societal transformation, beneficial to the workforce, and essential for achieving equality. But women experienced moments of inclusion which were both instrumental and temporary before being excluded from power structures after revolutions.

Benedict Anderson's concept of "imagined communities" explains national identity formation through shared stories and symbols, which create imagined bonds among members (2020). Women's participation appears to be part of this imagined unity, but

patriarchal structures restrict their roles and rights after the movement achieves its immediate goals. Women feature in national narratives during conflict periods but their political sidelining after peace agreements demonstrates the boundaries of their inclusion.

Benedict Anderson suggests that the imagined bonds connections between citizens need not create interactionally constructed social bonds of community. Anderson (2020) contends that nationalism comprises symbols, language, and shared rituals which shape the imagined communities. Anderson points out that in the MENA region, despite women's participation in the liberation and resistance movements, they were often symbolically included to represent unity and cultural continuity; however, they were not given equal status or power in the new state.

For decades, women have played key roles in armed resistance movements and grassroots activism. For instance, during the Arab Spring Uprisings (2010–2012), women participation helped ensure that these revolutions were representative of ordinary people. However, as new governments emerged following the revolutions, women were often sidelined, and their needs remained largely unaddressed (Johansson-Nogués, 2013). This underscores how women, while serving symbolic roles in narratives of national unity, received limited structural support. Consequently, this situation reinforced dominant gender stereotypes and perpetuated subordination within patriarchal systems. [Al-Ali \(2012\)](#) critiques Western and regional media for producing narratives that either romanticize or marginalize the role of women. Al-Ali (2012) points out that women's rights were sidelined after the revolutions have ended and that the patriarchal practices against women returned ignoring their vital involvements in the uprisings.

Examining media coverage in times of crisis allows for an assessment of how gender dynamics are manifested in the news. This involves scrutinising the representation of men and women in management positions across government, business and other key sectors as well as analysing how men and women are portrayed in media coverage of the crisis. The representation of gender, particularly women, in print media may be affected by crises that cause sudden changes in social structures (Beazer et al., 2023). Political crises, particularly the Qatar–Gulf crisis, highlighted the role of men as policymakers who outnumber their female counterparts, whereas the COVID-19 crisis highlighted the role of health workers, the majority of whom are women. For example, women play significant roles as responders in times of crisis by providing extra unpaid care work for families and societies (Lafrenière et al., 2019), while men in emergency situations assume the traditional role of protectors.

Representation of gender in health crises from 2019 to 2021

Like other countries in the global community, the pandemic has affected Qatar. In March 2020, the first wave of the virus began spreading throughout the country, and the government started to take action against the pandemic through preventive measures, such as social and physical distancing. According to Ayoub et al. (2021), despite the large number of COVID-19 cases in Qatar, the pandemic could have been far worse if no interventions had been enforced to reduce the spread, which helped minimise the risk of a second wave.

The COVID-19 pandemic, as a health crisis, required an immediate response to the pandemic that involved personal sacrifices and public action. Burkle (1999) affirms that public health is not limited to medical care, but reflects governance, transportation,

communication, public safety, the judiciary and other civil sectors. The COVID-19 pandemic undoubtedly led to unprecedented changes in the economic and socio-cultural landscape across the world (Alon et al., 2020; International Labour Organization, 2020; Jones, 2020; Al-Rawi et al., 2021; Tshuma et al., 2022), and the media landscape was not spared. Families suffered during the COVID-19 pandemic, and work intensity was high among all healthcare professionals, especially nurses, who played an extraordinary role in combating COVID-19.

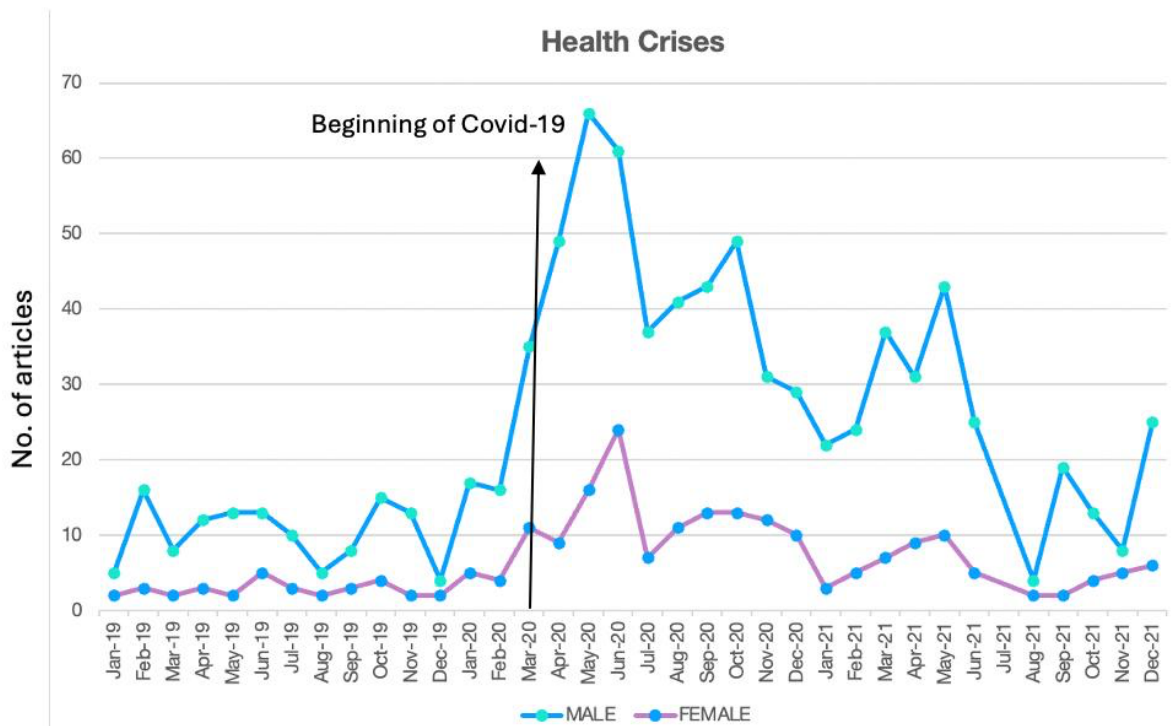


Figure 13 Monthly representation of males and females during health crises

Figure 13. demonstrates the monthly representation of males and females in the health crisis topic from January 2019 to December 2021. This period was analysed to compare gender representation before the COVID-19 pandemic and during its spread, as the community experienced various waves of the outbreak alongside fluctuations in the

stability of the virus. Males were generally represented more than females throughout the period, indicating that males were frequently quoted during health crises. In 2020, the representation of males and females in the articles increased, followed by a decline and stabilisation in 2021.

The representation of the men shows some minor fluctuations in 2019, with the number of articles below 10. In early 2020, there was a significant increase, in which men were dominant characters in more than 60 articles. After mid-2020, there was a decline in the number of articles, with some fluctuations, but towards the end of 2021, there was a slight rise again, as shown in Figure 13. However, women's representation is low compared to that of men and remains relatively steady through 2019. In early 2020, there was a sharp increase in female representation, reaching a peak of 25 articles in May. After this peak, the number of articles in which women were dominant characters decreased, but by the end of 2021, women's representation experienced a slight rise.

There was no noticeable difference between male and female representation during the period preceding the 2020 health crisis. The representation of men and women in the articles related to health maintained relatively low and stable levels, with men slightly higher than women on average. However, during the health crisis, the trend highlighted a significant change in representation around 2020. The gap in representation between men and women in news articles has increased since the crisis. Before the pandemic, the difference in the number of articles featuring either gender averaged between 5 and 10. However, after the pandemic, this gap widened to an average of 20–40 articles. For instance, in October 2019, men were represented in 15 articles, while

women appeared in 10 articles. By June 2020, men were featured in 65 articles, whereas women were represented in only 22 articles.

One of the most significant changes during the pandemic was social distancing measures to combat the spread of the virus, such as working from home and school closures, which placed a tremendous burden on families. Alon et al. (2020), Del Boca et al. (2020) and Gabster et al. (2020) confirmed that most of the additional household chores and childcare related to COVID-19 fell on females. In most societies, women already perform unremunerated care work, but the COVID-19 pandemic has led to a massive increase in this burden resulting from quarantine and lockdown (Power, 2020). The COVID-19 pandemic had a tremendous impact on gender roles, i.e. child and home care activities and school and workplace closures. According to Gabster et al. (2020), unexpected childcare, school and workplace closures during the pandemic have exacerbated challenges, particularly for women. The United Nations (2020) also emphasised that during the COVID-19 pandemic, for many parents, institutional and community child and home care was not accessible, and unpaid childcare provisions fell on females, limiting their ability to execute paid work.

Women may find themselves with limited opportunities for visibility in the media due remote work. For example, women in Qatar experienced many challenges during the COVID-19 pandemic, including coordination between household chores and work tasks due to the sudden shift to working remotely from home (Barbar et al., 2023; Daher-Nashif, 2024); on MENA Labor Markets the pandemic led to a significant decrease in employment and an increase in unemployment, women experienced more pronounced negative impacts compared to men (EIBehairy et al., 2022). They are less likely to be featured as

experts or sources in news articles related to a crisis because they are no longer actively engaged in their previous roles (Beazer et al., 2023). This change in work schedule can affect their ability to access and engage with media as they reduce their power to participate in decision-making roles. Consequently, this can impact the visibility of women's experiences and perspectives in media coverage related to the crisis. Such disparities can lead to a decrease in women's representation in the news media. As women's voices and experiences in hard-hit sectors are underrepresented in the media, the broader narrative becomes less balanced.

COVID-19 had a high adverse impact on women across MENA countries, such as job loss or reduced working hours, because the most impacted sectors were those where women were employed (ElBehairy et al., 2022). Many women had to take leaves or quit work to look after their kids or home-school them during the lockdown. Women unpaid work during the pandemic increased, adding more burden on them (Gengler et. al., 2021). The extra responsibilities and tasks fell on women during the pandemic created gender gaps in labour participation and income. According to the Global Gender Gap Report 2018, 2020 and 2021, out of 149 countries, Qatar ranked 127, 137 and 142 respectively. The report indicates that during the COVID-19 the pre-existing gap between men and women widened. The gap in gender representation in newspaper articles can be attributed to women's engagement with their traditional roles as mothers and care givers which resulted in a higher visibility and influence of male voices in media discussions during the crisis while alienating women, thereby not only exposing but also exacerbating pre-existing gender inequalities. The United Nations reported the effects of COVID-19 on women:

In the formal economy, care jobs, from teachers to nurses, are underpaid in relation to other sectors. In the home, women perform the bulk of care work, unpaid and invisible. Both are foundational to daily life and the economy but are premised on and entrench gendered norms and inequalities (2020, p.3).

Shifts in women's roles, challenges and economic status during the COVID-19 pandemic highlight distribution injustice (Fraser, 2003). The media's misrepresentation of women during the crisis keeps them in the background while favouring men in the foreground. Since crises also inflict an economic burden on women in terms of balancing their professional duties and familial responsibilities as mothers, the media prioritises men to be on the front of crisis-relevant news. This emphasises the unequal distribution of men and women across productive roles in society (Fraser, 2008). According to Fraser (2003), people require an equal distribution of wealth and resources to participate fully in society. Worldwide, most care work is done by females, as reported in the Gender Institutions and Development Database; 75% of unpaid care work at home is a woman's responsibility (Moreira da Silva, 2019). According to the International Labour Organisation, on average, women perform around four hours of unpaid care work per day, compared with about one hour for men (Pozzan and Cattaneo, 2020). When combining both paid and unpaid work hours, women in most countries, including the Arab Gulf states, work longer hours than men (Al-Ansari, 2020).

Figures 14 and 15 below demonstrate the most frequently used terms in the male-dominant and female-dominant health crisis-relevant articles, respectively. Some words are shared between the two genders (healthy, status, virus, disease, infection, centre,

care, patient and hospital). However, some terms are found more frequently in male texts than in female texts, and vice versa. Words like *institution, service, treatment, procedure, operation, doctor and manager* appear more often in the male category (Figure 14). In the female category, terms such as *child, family, university, life, care, protection, society and researcher* are frequently used (Figure 15). Based on this distribution of terms in male- and female-dominant articles, it can be concluded that the health crisis distinguishes health providers (males) from health carers (females).



Figure 14 The most frequently used terms in the male-dominant articles related to the health crisis



Figure 15 The most frequently used terms in the female-dominant articles related to the health crisis

In principle, both genders share similar responsibilities in healthcare, as evident by the most frequently used terms in the male and female categories which are linked to health status and services. However, by comparing each gender's most frequently used terms, it is evident that some words are used more often in relation to women than men. The terms used in the female category relate to care, such as child and family. Due to the persistence of traditional gender roles and women's labour market participation status, which is more often flexible and less remunerative, most care activities are more likely to

be done by a female (Power, 2020). During the COVID-19 pandemic, many more fathers were at home than on typical days, which provides a chance for males to model equal participation in care work at home; however, even if opportunities are available for families to share home and childcare responsibilities, most of these care activities fall on women (Promundo, 2020).

However, the terms that appeared more frequently in the male articles were related to leadership roles, such as doctor and manager. Likewise, other words are linked to significant health services, such as treatment, procedure and operation. The gender disparity in healthcare leadership is pronounced. Although women represent a majority in the public health system (75% female nurses / 33% female doctors) in the Qatar's public health system (DeJong and Fahme 2021), their representation in positions of greater responsibility and decision-making is minimal (Pérez-Sánchez and Madueño, 2021). According to Lafrenière et al., “gendered social norms affect women’s ability to make decisions, propose solutions, and lead, constraining women’s lives and choices” (2019, p.187). While most nurses are women (Alon et al., 2020), they often serve as the frontline responders in communities (United Nations, 2020; Murat et al., 2021). Women represent 70% of health workers globally, yet women hold only 26% of top management positions (World Health Organization, 2019). According to the Planning and Statistics Authority, the female labour force in Qatar in 2020 accounted for the largest share of participation in the education and health labour market at 56.2% (2021).

Women’s visibility in the media during the COVID-19 crisis was limited to roles traditionally viewed as feminine, such as caregiving and awareness; however, men were portrayed dominantly in crisis decision-making processes (Kassova, 2020; Smith, 2020;

Smith, 2022). The articles related to COVID-19 are highly varied in their content, i.e. economics, education, lifestyle and sports. Topics such as sports, economics, politics and tourism most frequently appear in the male-centred articles, while articles related to female representation are more likely related to entertainment, life and awareness, nutrition and safety procedures. In their study, Jones (2020) found that around 50% of quotations in COVID-19 coverage were attributed to women, just over a third were in the health and environment categories, just over a quarter were in the business and technology categories, and less than a quarter were in the science and politics categories.

In times of crisis, the gendered division of labour not only reflects but often exacerbates traditional societal norms: men are predominantly seen in public spheres as leaders and decision-makers, while women are confined to the private sphere, handling household chores and childcare. This observation aligns with findings by Meraviglia and Dudka (2011), who noted the persistence of traditional roles in crisis situations. In times of crisis, these roles are not just maintained; they are often intensified (Wörsching, 2011). Men are likely to be pushed further into leadership and command roles, tasked with making high-stakes decisions under pressure, as shown in examples 1 and 2 below. Women, on the other hand, may find their roles as emotional supporters and caregivers overly emphasised, potentially marginalising them from decision-making processes and leading to an increased burden in balancing professional and domestic responsibilities (McLean, 2021; Haney and Barber, 2022). Araújo et al. (2022) noted that, despite female national authorities taking the lead, women officials are still inadequately represented in COVID-19 news coverage, and male voices dominate as expert sources in this context. This dynamic can lead to a deepening of pre-existing inequalities, making it crucial to

consider not just the reflection of gender norms in crises but also their amplification (Andrew et al., 2022).

The following examples illustrate key male officials most frequently highlighted in the male-dominant articles about the health crisis.

Example 1

• جاء ذلك في مؤتمر صحفي عقده الدكتور عبد اللطيف الخال، رئيس المجموعة الاستراتيجية الوطنية للتصدي لفيروس كوفيد-19 ورئيس قسم الأمراض المعدية بمؤسسة حمد الطبي، والسيد صالح بن ماجد الخليفة وكيل الوزارة المساعد لشؤون التجارة بوزارة التجارة والصناعة، حول مستجدات جائحة كورونا في قطر

- This came at a press conference held by Dr Abdul Latif Al-Khal, Chairman of the National Strategic Group to Address the COVID-19 Virus and Head of the Infectious Diseases Department at Hamad Medical Corporation, and Mr Saleh bin Majid Al-Khulaifi, Assistant Undersecretary for Commerce Affairs at the Ministry of Commerce and Industry, on the development of the COVID-19 pandemic in Qatar. (Self-translation)

Example 2

- أعرب الشيخ محمد بن حمد آل ثاني مدير إدارة الصحة العامة بوزارة الصحة العامة، خلال مؤتمر صحفي
- Sheikh Mohammed bin Hamad Al Thani, director of the Public Health Department at the Ministry of Public Health, said during a press conference. (Self-translation)

With the development of a predominantly male managerial elite, gender inequalities are increasingly becoming an issue in nursing (Porter, 1992). While healthcare workers shared a massive responsibility for controlling the situation and taking care of COVID-19 patients, the front-line workers followed the guidance of higher authorities, which are male-dominated. The terms that appeared in the male articles, as shown in Figure 8, are characteristic of control and power. Bennett et al. (2020) found apparent rifts between workers and management, as well as between senior and junior staff, and between those with more or less power within the system in the UK. Consequently, in addition to the direct impact of the pandemic, the differences between

gender terms in healthcare indicate that the crisis reinforces pre-existing inequalities. The COVID-19 crisis reveals and highlights the disparities that may have been less visible or less recognised during stable times.

Based on the analysis of the data, the portrayal of women in the newspaper articles during the crises continues to reinforce the stereotypical prominence of men over women. This reflects deeper economic structures in which women's labour, especially unpaid labour at home, is undervalued and often invisible in economic discussions. In crises, women are disproportionately impacted due to their overrepresentation in lower-paid and precarious jobs. Undervaluing women's labour disconnects and distances them from the significant roles they truly play. Fraser (2008) asserted that all members of society should enjoy equal social standing by valuing their contributions, identities and roles to be able to participate fully in society. Media does not recognise women as individuals, but instead recognises their sacrifices and actions, which are usually presented in a male-gendered context. Women become culturally misrecognised when their agency and contribution is restricted to a narrow topic or when they are excluded from mainstream society. Misrecognition of women's broader roles – such as leaders, scientists or activists – perpetuates stereotypes that reduce their agency and contributions to a limited domestic sphere. Schein (1973) posits that both men and women commonly perceive successful managers as possessing characteristics traditionally ascribed to men. This stereotype emerges from societal constructs of gender roles, where leadership is often aligned with specific qualities—such as assertiveness, dominance, and competitiveness—which are culturally coded as masculine. The media's representation of women as subordinates while shadowing their contributions is characterised as recognition injustice. The media

tends to frame women in a secondary role (Mamasodikova and Ergasheva, 2022), which does not reflect their true socio-economic contributions (Qianru, 2020). In a health crisis, women are often portrayed as nurses or support staff, while men are featured as doctors or administrators (Pérez-Sánchez and Madueño, 2021; Araújo et al., 2022), and newspapers tend to portray women as specific culturally gender stereotypical topics and roles (Kassova, 2020; Smith, 2020; Smith, 2022).

The media portrayal of women during the COVID-19 health crisis in Qatari newspapers reflects the tensions and limitations inherent in Qatar's model of state feminism. Although state feminism encourages the rise of women in the form of institutional frameworks, which in most cases does so to propagate modernity and national development, the pandemic has scuttled the appearance of numerous women in the limelight (Hassan Abdulmajeed Fouad, 2024). This inconsistency is another reminder of how weak and contingent the discourse of real representation of women is in state feminism, where their inclusion is instrumental, not transformative (Muller and Camia, 2023). With COVID-19, male voices took over the media space, as much as Qatar had established its formal commitments to gender equality both by national strategies and by national institutions. Such arbitrary display is hand-in-glove with conservative state feminism, which lauds the role of women in education and healthcare but is hesitant to propose them as a powerful voice in the case of national crises.

The increased domestic burden on women due to remote work and school closures significantly curtailed their participation in public life, indirectly reducing their representation in the press. Instead of threatening these power structures, Qatari newspapers tended to reflect the established patriarchal norms by omitting women

researchers and decision-makers when discussing any social issues (Muller and Camia, 2023). It is indicative of a trend in that state feminism, though formally empowering women, fails to break the gender hierarchy and, on the contrary, allows coping with traditional roles in a way that shores up the identity of women as belonging to the domestic front amid the crisis. The model of empowerment of the state did not translate into equal discursive space in the case of a national emergency, which makes clear symbolic instead of substantive promise-keeping in terms of gender equality (Hassan Abdulmajeed Fouad, 2024). Therefore, state feminism in Qatar, though it delivered high-ranked female figures during peacetime, failed to support the visibility and influential role of women in media and policy-making under pressure, as it prioritised national stability over gender justice.

Representation of gender in political crises from 2016 to 2018

On 5 June 2017, regional neighbours Saudi Arabia, the United Arab Emirates, Bahrain and Egypt cut diplomatic relations with Qatar and closed their land, sea and air borders, beginning a crisis that lasted until the signing of the reconciliation agreement on 5 January 2021. During that period, the media, including newspapers, intensively covered the crisis. Figure 16 below shows Al Raya newspaper's monthly representations of males and females in the political crisis from 2016 to 2018. Analysing articles within these three years helps compare gender representation during the crisis and explores the response to it, as the community experienced political shock that led to changes in many socio-economic aspects. Crisis offers a valuable perspective for examining shifts in gender representation within the political arena.

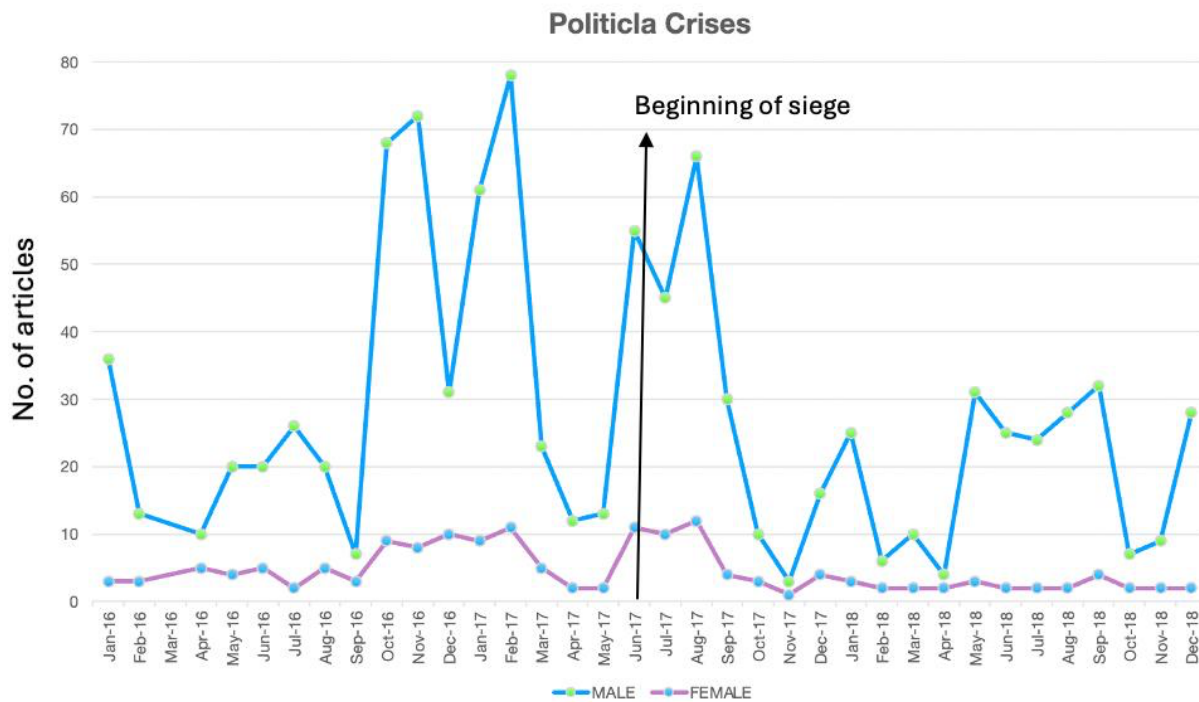


Figure 16 . Monthly representation of males and females during political crises

As illustrated in Figure 16, there is a noticeable variation in gender representation over the three-year period analysed, with men being much more dominantly represented than women in political crisis articles. There were several peaks, with the number of articles featuring men reaching between 50 and 80, particularly notable in the last quarter of 2016 and during 2017. Men’s representation saw a sharp decline in September 2017 but experienced slight increases in certain months towards the end of 2018. The representation of women in articles about political crises has been consistently low over the years. However, there were notable peaks during the last quarter of 2016 and the beginning of 2017, reaching about 10 articles during those months. Before the Gulf-Qatar crisis, several political events were affecting Arab countries, including Qatar, such as Qatar hosting Hamas and Qatar's relationship with terrorism and Iran (Al-Hashami,2022).

These discussions were a prelude to the crisis later on. For example, in January 2017, Trump took a political tour of the Gulf countries. After August 2017, the representation of women declined and remained constant till the end of 2018. Overall, representation of women remained within a narrow range compared to the period before the political crisis in 2017.

Recently, there has been a growing presence of Qatari women in several nontraditional occupations within the labour force (Lari et al., 2022). Women had become more visible than before in decision-making positions, such as women participating in Members of Shura Council³⁴ and Municipal Council by 10% and 7%, respectively (Planning and Statistics Authority, 2020). While it cannot be denied that Qatari women are still underrepresented in politics and decision-making, they have made remarkable progress. Women's recent role in the political domain is attributed to empowerment strategies changing their past passive participation in these fields. For example, Lolwah Al-Khater is a Qatari diplomat who is the first Qatari woman to hold the position of Spokesperson for the Qatari Ministry of Foreign Affairs and Assistant Foreign Minister of Qatar. This transition from passive participation to active engagement highlights a regional dynamic. As Sakr (2004) discusses, women in MENA regions have increasingly found power through self-expression. Women utilise various media platforms to articulate their identities and contribute to public discourse, thereby challenging traditional gender roles.

In contrast, following the crisis, the focus of newspaper articles shifted towards a more male-centric portrayal at the beginning of June 2017. The Qatar–Gulf crisis was

³⁴ The Shura Council discusses legislation and laws that the Council of Ministers refers to after being approved, government policies, and draft the state budget.

primarily political, making politics a highly frequent topic in media coverage. As shown in Figure 13, after the Qatar–Gulf crisis, this gap in the number of articles featuring each gender expanded to an average of 20–40 articles. For instance, at the beginning of the siege in July 2017, men were represented in 50 to 70 articles, whereas women were represented in only 10 to 12 articles. In political crises where the projection of power and authority becomes crucial, men are more frequently depicted as central figures because they traditionally align with societal expectations for leadership roles. Shor et al. (2015) confirmed that the overrepresentation of men over women in the media is attributed to the expectations of both genders. Media coverage often highlights policy responses and government actions to inform the public about decisions that affect them, such as new laws, aid packages, public safety measures or international cooperation. Politicians also focus on discussing the societal impact of crises, including the effects on the economy, social inequalities and community resilience.

During the Qatar–Gulf crisis, Qatar announced a state of emergency in some key areas, such as military units, ministries and human rights commissions. Since political arenas tend to be male dominated, men’s voices are often heard more frequently in news articles, so men as politicians and elites were the centre of media attention during the crisis, where they assumed the traditional role of protecting the vulnerable and defending the country. The media tends to deliver news or information straightforwardly, ensuring that readers can quickly grasp key news without unnecessary complexity, making the content accessible to a wide readership. To achieve this goal, media includes quotes, statements or opinions of relevant individuals or sources, typically male individuals in key

strategic positions (Kurzman et al. 2007; Milner, 2010; Shor et al., 2015; Araújo et al., 2022), adding credibility and context to the story.

The media's significant underrepresentation of certain groups, including women, can be attributed to their limited presence in key positions of power in fields like politics, business and sports, which are the most frequent topics of news coverage (Shor et al., 2015). According to the Planning and Statistics Authority (2020), the participation of men in decision-making is higher than women; for example, 90% of members of the Shura Council and Municipal Council are men, and the percentage of male project managers in the government department, government corporation, mixed and private sectors is 76%, 82%, 77% and 85%, respectively. Due to men's high participation in decision-making, they dominate media coverage, and their names appear more frequently. As a result, the imbalance in newspaper representation largely stems from gender disparities in socio-economic participation, in which individuals occupying influential positions within organisations and institutions tend to receive more media attention. While the disproportionate representation in media may reflect existing disparities in socio-economic participation, the media's role in reinforcing stereotypes about women amplifies these inequalities rather than challenging or addressing them.

The most frequently used terms in the male-dominant and female-dominant political crisis-relevant articles, respectively, are displayed in Figure 17 for the male corpus and in Figure 18 for the female corpus. It is evident that the major terms are shared between genders (e.g., state, soldier, siege, procedure, work, country, Palestine, and Saudi Arabia). While some terms are more frequent in male corps than in females, the reverse is also true. Terms like *president*, *Qatar*, *government*, *minister*, *politician*, *party*,

the Middle East and North Africa had the lowest rates of female participation in chief executive officer positions compared to other regions, with only 10.2%. The Qatari context, as a conservative society with obvious gender differences in political power and leadership, despite rapid changes resulting from its socio-economic transformation, has made tremendous strides towards gender equality and women's empowerment (Salem and Yount, 2019). Although integration of women into higher education and employment spaces has dramatically increased, they are still subject to traditional norms and strive to attain political management positions, which has created male-dominated leadership (Shockley et al., 2020; Lari et al., 2022).

From another perspective, the difference between gender words lies in the fact that the political terms frequently used by men are related to the local policies of the state, such as the Qatar–Gulf crisis or Gulf issues. This confirms that women's participation in political decision-making is much less than that of men's in Qatar society. The terms that more frequently appeared in the male text reflect the dominance and leadership of men in the political sphere, such as *president*, *minister*, *politician* and *election*. Van der Pas and Aaldering (2020) confirmed that male politicians are more often portrayed in the media in terms of their leadership traits. The terms more frequently appearing in the female text represent women as reporters for political events, such as *occupation*, *system* and *agency*.

During the Qatar–Gulf crisis, the newspaper articles tended to focus on critical events, such as the impact of the crisis on political relations, economics and social relations, where men led most of the discussion of these specific events and their statements were at the core of the crisis and Qatar's foreign policy. However, despite

women's senior positions during the crisis, they discussed secondary topics partially relevant to the crisis. This distinction highlights that while women's contributions, such as the statements of the Her Excellency (Examples 1 and 2) regarding the Japanese journalist and the World Cup, were tangentially related to the crisis, the statements by Sheikh Mohammed and the male academic (Examples 3 and 4) directly addressed its core political and diplomatic aspects. As the examples below show, there is little evidence of women as dominant characters who discuss issues concerning siege or local political issues, while there are many articles that discuss critical Qatar–Gulf political events where men are dominant characters. In this context, El-Said et al. (2015) critique the simplistic portrayals of Arab women as either victims or heroines. They emphasise the importance of understanding the nuanced ways in which these women navigate and influence socio-political changes. For instance, during the Arab Spring, dominant narratives either celebrated women's participation or lamented the threats to their rights. However, such perspectives often overlook the complex realities of women's experiences and their agency.

Example 1

- أكدت سعادة السيدة لولوة الخاطر المتحدثثة باسم وزارة الخارجية أن قطر لم تدفع فدية للإفراج عن الصحفي الياباني الذي كان محتجزاً لدى مسلحين في سوريا منذ أكثر من 3 سنوات
- Her Excellency Lolwah Al-Khater, Ministry of Foreign Affairs spokesperson, confirmed that Qatar has not paid a ransom for the release of the Japanese journalist who had been detained by militants in Syria for more than 3 years (Al Raya, 2018).

Example 2

- أكدت سعادة السيدة لولوة الخاطر، المتحدث الرسمي باسم وزارة الخارجية، أنّ تنظيم مونديال كأس العالم 2022 بقطر مؤكد، وليس مرتبطاً بالمرّة بالأزمة الخليجية

- Her Excellency Lolwah Al-Khater, Ministry of Foreign Affairs spokesperson, said that organising the World Cup 2022 in Qatar is certain and is not at all linked to the Gulf Crisis (Self-translation).

Example 3

- قال سعادة الشيخ محمد بن عبد الرحمن آل ثاني وزير الخارجية إن دولة قطر ترفض أي تدخلات بسياساتها الخارجية
- His Excellency, Sheikh Mohammed bin Abdulrahman Al Thani, Minister of Foreign Affairs, said that the State of Qatar rejects any interference in its foreign policies (Self-translation).

Example 4

- أكد الكاتب والأكاديمي د. عبد الحميد الأنصاري، أن البيان الذي أصدرته وزارة الخارجية صباح أمس للرد على الخطوات السعودية والإماراتية والبحرينية بقطع العلاقات مع قطر وإغلاق الحدود البرية والبحرية والجوية يتسم بالتوازن والاعتدال
- Writer and academic Dr Abdul Hamid Al-Ansari stressed that the statement issued by the Ministry of Foreign Affairs yesterday morning in response to the Saudi, Emirati and Bahraini steps to cut relations with Qatar and close land, sea and air borders is balanced and moderate. (Self-translation)

Based on the analysed data, men's dominance in media coverage is restricted to traditionally masculine topics such as politics, economics and sports. When the Gulf crisis started, the articles regularly showed male prominence in most months because, just like any political crisis, power is required, and men as sources of power are expected to play this role. This trend reflects not merely a media bias but a deeper societal structure in which males hold positions of power and represent symbols of authority and stability in times of political turmoil. The findings of this research support the traditional stereotypical prominence of men over women, especially in male-dominated topics. In political crises, where the projection of power and authority becomes crucial, men are more frequently depicted as central figures because they traditionally meet societal expectations for leadership roles. This trend can be linked to Fraser's concept of representation, which

highlights how certain groups, particularly women, are marginalised and alienated from key positions, decision-making processes, and public discourse. In this context, media representations that are centred on men reinforce the exclusion of women from political narratives and leadership roles, further perpetuating existing gender hierarchies and limiting their full participation in society. According to Fraser (2008), exclusion from representation is a form of political injustice. In crises, this marginalisation becomes more pronounced as male-dominated portrayals in the media reinforce the idea that political power and authority are inherently male domains, leaving women and other underrepresented groups excluded from the political discourse. Thus, the underrepresentation of women in political crises, as depicted in media, not only reflects but also perpetuates their political exclusion, highlighting Fraser's critique of societal structures that inhibit equal participation in the public sphere.

The Qatar–Gulf political crisis exposed the structural limitations of state feminism in sustaining gender parity in public representation during moments of national threat. Although Qatar has been investing heavily in increasing the visibility of women through its national machinery, such as the Ministry of Social Development and Family, and with the help of global institutions, the results have not reached equivalence in media coverage when things go awry politically (Liloia, 2019). With the development of the crisis, the media focus shifted towards appealing to national power, sovereignty, and resilience, which is masculinized, both in the Qatari society and politics (Liloia, 2019). In turn, the women's representation in the political crisis coverage deteriorated significantly, and men continued dominating the airwaves as spokespersons, diplomats, and analysts. This

reflects how state feminism in Qatar remains tethered to a patriarchal logic that permits women's advancement only within state-sanctioned roles and narratives.

State feminism in Qatar has often been performative, instrumentalizing elite women to bolster the country's international image while avoiding more disruptive gender reforms domestically. During the political crisis, the need for a unified, stable, and authoritative state image constrained the visibility of women in political media narratives (Paul, 2019). The militarized and diplomatic nature of the crisis reinforced masculinist representations of authority and leadership, sidelining women even when figures like Lolwah Al-Khater held prominent positions. The media's failure to center such exceptions underscores how even empowered women remain marginal when narratives of national security and power are at stake. Thus, while state feminism nominally includes women in political development, it falls short of securing their representation in national storytelling during moments of crisis (Paul, 2019). It reveals the conditionality of their empowerment, acceptable in ceremonial or development contexts, but not in security and sovereignty discourses that define nationhood and political legitimacy.

Chapter 6

Conclusion

I began this dissertation with a fundamental statement: It is not about how often women appear in the media, but how they are portrayed. It is now evident that women's representation in the media is not static; it shifts based on the roles they play in different settings.

To understand how women are represented – and why they are less represented – in Qatari newspaper, I first identified the topics and the patterns in quotations. The use of Natural Language Processing (NLP) in this research to analyse data from a large body of Arabic articles is pioneering. Arabic is a morphologically rich and complex language thanks to words inherent inflectional and derivational characteristics. The significance of this study lies in the fact that much of the previous research on gender-based analysis has primarily centered on addressing gender bias in English NLP models and systems. The challenge of addressing this problem in languages that are poorly resourced and/or have complex morphological structures, such as Arabic, has lagged, mainly due to the scarcity of datasets and resources. This study contributes to the field by describing the technique to extract gender information from large body of data using resources and tools associated with NLP.

The research found that women have been less represented than men in Qatari Al Raya newspaper articles across topics over a nine-year period. Having discerned the overall representation patterns of women and men in this context, I then identified clear differences in gender prominence based on the topic. Male prominence is most evident in topics such as diplomatic relations, sports, and political issues, while female prominence is more pronounced in themes such as health, social, cultural, and family

issues. The media focus on women in certain fields (e.g. family, education, and health) often reinforces stereotypical roles (Armstrong, 2004; Collins, 2011). This portrayal aligns with societal norms and expectations regarding women's responsibilities, resulting in fewer stories that feature women outside these domains.

By tracing how gender representation in newspaper has evolved over time, I pinpointed specific events that demonstrably impacted portrayals of men and women. During crises, the political crisis of 2017–2018 (the Qatar-Gulf crisis) and the health crisis of 2020–2021 (the COVID-19 pandemic), these portrayals underwent significant fluctuations that differed depending on the type of upheaval.

Due to unexpected changes in gender roles and relations during or after crises, gender inequality and discrimination tend to be either exacerbated or alleviated, and the roles of men and women can be reshaped as a result of these sudden changes in gender structure. Shifts in women's representation are complex matters that are crucially influenced by various factors, such as the political, social, and cultural contexts in which media coverage occurs. As Sakr (2004) argues, women's experiences with media in the Middle East are shaped by intersecting factors, including nationality, class, religion, political context, and the specific media platforms through which representation is disseminated. Women were underrepresented in newspaper coverage even before health or political crises; however, that underrepresentation was exacerbated during the crises. Men's representation in newspaper coverage most often took the form of decision-making and leadership roles.

Representations of women in the media reflect existing societal inequalities. The media tends to focus primarily on the highest levels of occupational and social

hierarchies, where women's representation has historically been lacking (Shor et al., 2015). However, these inequalities worsen during periods of crisis because the pre-existing preference for authoritative (male) voices intensifies during such periods. In other words, the media not only reflects existing inequalities; it amplifies them through this gendered preference for authority, which becomes more pronounced under pressure. Thus, crises reveal and intensify the underlying gendered assessment of what constitutes authority. The media's reliance on established leadership figures, who are often male, exacerbates the underrepresentation of women's expertise and perspectives during critical moments. For instance, during the COVID-19 pandemic, newspaper coverage often focused on the emotional toll on female healthcare workers, while male doctors were depicted as decisive figures leading the fight against the virus. This gendered framing of the hero narrative not only reflects existing societal norms but also reinforces them, potentially marginalising women's experiences and contributions during crises.

It is evident that crises can disrupt existing power relations and gender roles, leading to shifts in media representations of gender. During crises, media coverage often prioritises immediate concerns and features prominent figures, which can sideline or marginalise the experiences and perspectives of marginalised genders, particularly women. The analysis of Al Raya newspaper coverage during the crises examined whether media coverage amplified or diminished the voices and experiences of gender minorities such as women. In light of Fraser's (2008) redistribution dimension of the theory of justice, the research results affirm the media's promotion of gendered distribution injustice in terms of unequal roles and access to opportunities. The media's underrepresentation of women in health and political domains can be seen as a challenge

to their full participation in society. Another aspect of such distribution injustice is the fact that women, during crises, generally assume traditional, stereotypical roles, i.e. taking care of family and providing support.

The portrayal of women in the newspaper articles published during the crises reinforced the stereotypical prominence of men. For instance, during both the COVID-19 pandemic and the Qatar-Gulf crisis, men dominated coverage, in which they were often featured as experts and officials, while women were most often cited regarding personal experiences or roles that were only indirectly related to the crises. This affirms Fraser's (2008) concept of recognition injustice – the media's promotion of the stereotypical representation of women as socially secondary to men undervalues and limits women's contributions to domestic issues. It also highlights representation injustice by limiting women's participation to specific, culturally stereotypical gender topics and roles. During the COVID-19 and Qatar-Gulf crises, women's representation in Al Raya newspaper was low, alienating women from key roles and granting them only limited opportunities for participation in society. This focus on the male role reinforces a pre-existing power dynamic and creates a perception that men are the natural problem-solvers in times of crisis.

The analysis of the data revealed deference to pre-existing authority in newspaper articles during crises, reproducing stereotypical gender inequalities. This deference suggests that people tend to trust and refer to those who already hold positions of power (Araújo et al., 2022). In many societies, men dominate management positions, leading to a subconscious bias: Men are seen as more qualified to handle leadership situations (Eagly, 2007; Cuddy et al., 2015; Rink et al., 2019). In times of crisis, media outlets tend

to defer to established gendered structures of authority, which typically prioritise male perspectives and leadership roles (Araújo et al., 2022). This preference for male voices and leadership can marginalise women and undermine the potential for diverse perspectives in decision-making processes. Research indicates that gender-based biases present significant barriers for women, particularly in traditionally male-dominated fields, such as engineering and executive leadership (Wessel et al., 2015). These biases are exacerbated in times of crisis, during the COVID-19 and Qatar-Gulf crises, the media's deference to male experts and leaders reinforced the stereotypical gender inequalities in the Qatari media.

Crises and challenging situations illuminate how women are portrayed and discussed in the media. They also highlight pre-existing issues and vulnerabilities, making them impossible to ignore (Gordon-Bouvier, 2021). During political or health crises, for example, gendered portrayals become even more pronounced as they intersect with broader social issues. What was once deemed essential may no longer hold the same importance during a crisis; new values and perspectives can emerge. Although new values and perspectives can and do emerge during these times, turmoil can also act as a catalyst for cultural conservatism.

The results of this study indicate a large representational gap – representation injustice, as described by Fraser (2008). More often featuring and quoting men in Qatari newspaper is not just numerical but also qualitative; this prioritisation is indicative of a structural bias in which men are portrayed as decision-makers and leaders while the voices of women are marginalised. Such practices denote a representational injustice that undermines women's participatory parity in public discourse.

The representation of women in the media occurs within a broader societal context that prioritises and values the experiences and contributions of men over those of women. In the context of a crisis, media outlets may predominantly focus on the actions and statements of key leaders, emergency responders, or other high-profile individuals while overlooking the crucial roles and experiences of women. The media's prioritising of men over women reinforces traditional gender roles and power dynamics, further entrenching gender inequality in media representation.

These findings can be further understood through the lens of Nancy Fraser's theory of justice, particularly in relation to the concept of state feminism. State feminism is the attempt by governmental institutions to support gender equality by institutional methods like law, policies, by making formal appointments. In Qatar, the government has led in the gender inclusiveness trend as they have promoted the education of females and entry into certain fields. Yet the outcomes of this research indicate that such official action has not yet been fully transformed into fair access or representation at the public level, at least in times of crisis. Despite women's access to education and jobs, the marginal role played by women in media in times of political and health emergencies shows there is a disparity between the state policies and social reality. The media's treatment of women in crisis reporting exposes an ongoing pattern of symbolic exclusion, where women are not recognized as authoritative voices in public debates.

Nancy Fraser's multidimensional framework of justice emphasizes redistribution, recognition, and representation as key pillars of social equity. Although to some extent, redistributive justice has been achieved in Qatar, e.g., more women are educated and working, recognition and representation are still missing. Recognition injustice is a form

of injustice that takes place when persons or a group are stereotyped or misrepresented, whereas representation injustice takes place when the persons or group involved are not allowed to take part in decision-making or social debate. These two injustices can be pointed out by the underrepresentation of women in media during the crises. Not only are women underrepresented on the news, but they are also pushed into traditional or supporting characters, disseminating the old gender norms. This stops women from taking an active role in the social and political debate, which determines national identity and reaction when the crisis hits home.

A crisis is a period of time that adds greater visibility to the leadership and expertise. A systematic under-representation of women by the media exposes women to the belief that leadership is male. This conflicts with the objectives of state feminism, which seeks to naturalise female inclusion in every aspect of social life. In order to create participatory parity as Fraser describes, every member within the society should be able to contribute to the matters of mutual debate and discourse. This will not only necessitate structural changes in Qatar but also cultural reforms in an institution like the media. To solve representation injustice, there is a need for media houses to ensure the inclusion of women's voices in every field of reporting. Without this shift, state feminism remains limited in scope, unable to challenge the deeper cultural and institutional biases that hinder genuine gender justice.

Limitations

In current research, the underlying semantic and morphological complexity of Arabic language caused ambiguity leading to data sparsity and reducing the interpretability of topics. Due to Arabic language semantic and morphological

complexity, the Arabic LDA coherence value between similar words for a topic where 0.65 out of 1 which is considered lower than English. Nevertheless, the LDA model was the best choice to be applied to Arabic texts despite its limitations. To mitigate the implications of Arabic LDA limitations, several data preprocessing techniques, such as lemmatisation and removing stop words, were carried out to improve the accuracy of the LDA model.

Another limitation is the choice of the study sample. Current study sample included one local newspaper, Al Raya Newspaper. Such a choice might not have been representative of other local Qatari newspapers, which could have caused bias in generalising results. The researcher recommends that future research may expand the study sample to include a wider range of local Qatari newspapers, and potentially regional or international Arabic-language newspapers, alongside other forms of media, to ensure a more comprehensive and representative analysis of media portrayal.

Another limitation in current research is the potential influence of unobserved third variables, also known as confounding factors. These are variables that are not measured or controlled for in the study but may be related to both the independent and dependent variables. As a result, an observed correlation between two variables might not reflect a direct causal relationship but rather a spurious association driven by the unobserved confounder.

This thesis has not employed a time-series regression technique, such as ARIMA or regression models with auto-correlation robust standard errors, to test changes in women's representation before and after crisis events. The primary reason for this is

that the original research design focused on descriptive and comparative methods rather than forecasting or modeling temporal dependencies. I acknowledge that the use of time-series regression would have provided a more robust statistical assessment of the significance of trends over time, particularly in evaluating the relative increase or decrease in women's representation during crisis periods. This methodological choice is therefore noted as a limitation of the current study, and future research could build on this work by incorporating time-series techniques to strengthen causal inference and temporal analysis.

Recommendation

Building on this dissertation, future research can explore several avenues.

This dissertation offers a nuanced analysis of women's representation in a widely read Qatari newspaper over nine years. By focusing on the impact of two significant crises – a political upheaval and a health emergency – the study sheds light on how such events can influence media portrayals. While the investigation was limited to these two events to allow for in-depth analysis, the patterns uncovered may well hold true for other types of crises. Future research on gender in other parts of the Arab world could explore the representation of women during other crises to broaden our understanding of this phenomenon.

While existing research on women in news coverage often prioritises high-profile figures and politicians (Williams, 2020), a critical gap exists in understanding the representation of women outside prominent positions in society (Mitchelstein et al., 2019). A deeper understanding of how women who are not in key positions are portrayed in the media can inform policy changes and advocacy efforts. By highlighting

underrepresentation or biased portrayals of these women, researchers can advocate for more inclusive and balanced media coverage. This, in turn, can contribute to empowering women and promoting gender equality, leading to increased participation by women in society, as advocated by Fraser's participatory parity within the theory of justice.

While this study focused on the representation of women in Qatari media, future research could benefit from incorporating a comparative lens. Analysing media portrayals of women and men across different geographic contexts can offer valuable insights. Studying the representation of women and men in other Arab countries, particularly those with similar cultural and religious backgrounds, could reveal commonalities and divergences in media narratives across the region. This could help to identify broader trends and factors that may influence gender portrayals. Comparing Qatar to countries with different political structures, legal frameworks, and gender equality advancements could shed light on the impact of these factors on media portrayals. For example, comparing Qatar to countries with more established feminist movements or stronger legal protections for women could highlight potential areas for improvement in Qatar's media landscape.

By conducting regional and national comparisons, researchers can gain a more nuanced understanding of how the representations of women and men are shaped by specific cultural contexts, political systems, and legal frameworks, thereby clarifying the factors that shape gender representation. This comparative approach can contribute to developing best practices and informing policy changes that ultimately promote a more inclusive and equitable media landscape for all genders.

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Index

Courtesy and Professional Titles

Male	Female	Translate
أخصائي	أخصائية	Specialist
أستاذ	أستاذة	Professor
استشاري	استشارية	Advisor
إعلامي	إعلامية	Informative
أمير	أميرة	Prince /Princess
باحث	باحثة	Researcher
تاجر	تاجرة	Merchant
جامعي	جامعية	Collegiate
جندي	جنديّة	Soldier
حارس	حارسة	Guard
خبير	خبيرة	Expert
خريج	خريجة	A Graduate
دبلوماسي	دبلوماسية	Diplomat
دكتور	دكتورة	Doctor
رئيس	رئيسة	President
رسام	رسامة	Artist
سفير	سفيرة	Ambassador
سكرتير	سكرتيرة	Secretary
سيد	سيدة	Mr./ Ms.
شاعر	شاعرة	A Poet
شيخ	شيخة	Sheik /Sheikha
صاحب	صاحبة	His/Her Royal Highness
صحفي	صحفية	Journalist
طالب	طالبة	A Student
طبيب	طبيبة	Doctor
طيار	طيارة	Pilot
فائز	فائزة	Winner
فنان	فنانة	Artist
قائد	قائدة	Leader
قاضي	قاضية	Judge
كاتب	كاتبة	Writer
لاعب	لاعبة	Player
مؤلف	مؤلفة	Author
متحدث	متحدثة	Speaker
متدرب	متدربة	Trainee
متسابق	متسابقة	Competitor
محامي	محامية	Attorney
محلل	محللة	Analyser
مخترع	مخترعة	Inventor
مخرج	مخرجة	Director
مدير	مديرة	Manager
مذيع	مذيعة	Announcer

مرشح	مرشحة	Candidate
مرشد	مرشدة	Guide
مسؤول	مسؤولة	Responsible
مستشار	مستشارة	Advisor
معلم	معلمة	Teacher
مغني	مغنية	Singer
مقيم	مقيمة	Resident
ممرض	ممرضة	Nurse
مهندس	مهندسة	Engineer
مواطن	مواطنة	Citizen
موظف	موظفة	Employee
ناخب	ناخبة	Voter
وزير	وزيرة	Minister
وكيل	وكيلة	Agent

Participants Information Sheet



THE UNIVERSITY *of* EDINBURGH

School of Social and Political Science
Sociology Programme

PARTICIPANTS INFORMATION SHEET

Title of study: Gender Dynamics in Times of Crisis: A Critical Examination of Women's
Representation in Qatari Newspaper

Start and end date Sep 2020 -Sep 2024

**We would like to invite you to take part in a research study.
Before you decide you need to understand why the research is being done and what it
would involve for you. Please read the following participant information sheet carefully,
and take time to decide whether or not you wish to take part.**

Please take time to read the following information

- Thank you for taking the time to participate in pilot study.
- Before you decide if you wish to continue, you need to understand why the study is being conducted and what it will involve.
- This study is being carried out to explore how women and men portrayed in the newspaper articles in the State of Qatar.
- Your participation in this study is entirely voluntary, and you are not obliged to take part.
- If you do elect to take part, you will manually assign gender labels by check the dominant characters for each article, whether male, female, both genders or neither, by labelling the articles via courtesy and professional titles.
- The articles assign will take approximately 30 minutes for all articles.
- Your information is essential, it will be treated with respect at all times. No names will be used within the study itself to ensure your confidentiality is guaranteed.
- As a participant, you will not benefit personally, and the purpose of this study is not to cause any anxiety, stress or embarrassment to participants.
- The results of this research will be presented at academic article and will not be published.

Thank you for taking the time to read this form, and hope that I have provided you with sufficient information to enable you to begin the questionnaire

Consent form

Title of study: Gender Dynamics in Times of Crisis: A Critical Examination of Women's Representation in Qatari Newspaper

1. I confirm that I have read and understood the information sheet for the above study
2. I understand that my participation is voluntary and that I am free to withdraw from completing the questionnaire
3. I understand that I will not be identified individually within the study
4. I agree to take part in the above study

Please tick
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Participants Signature

Researchers Signature

Contact Information:

This research has been reviewed and approved by the Edinburgh University Research Ethics Board. If you have any further questions or concerns about this study, please contact:

- Name of researcher: Reem Al-Kuwari
- E-mail: s1798899@ed.ac.uk

Appendix: Python code

Examples

Gender category: Male main dominant characters

NLP extract gender information results

17/06/2020	2020	Jun	146128.txt	MALE
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Newspaper article

كشف **الدكتور** محمد العامري استشاري أول طوارئ الأطفال رئيس قسم الأطفال بمؤسسة حمد الطبية المدير الطبي لطوارئ الأطفال بمؤسسة حمد الطبية أنّ العُمُر المناسب لارتداء الطفل للكمامة هو عامان.. موضحاً أن الأفضل للأطفال هو عدم الخروج من المنزل إلا للضرورة، حيث إن التزام المنزل هو السبيل الأمثل لحماية الأطفال من العدوى بفيروس كورونا «المستجد» كوفيد-19.

ونصح **الدكتور** العامري، في تصريحات ل الراية، أولياء الأمور بضرورة الحرص على الالتزام بالإجراءات الوقائية لأطفالهم، ومنها في المقام الأول عدم الخروج من المنزل، وفي حال خروج الطفل من المنزل وارتداء الكمامة يجب مراقبة الطفل باستمرار لضمان إحكام الكمامة على الوجه وارتدائها بالشكل اللازم حتى تؤدي الهدف منها

وأضاف إنّ عدد الإصابات بين الأطفال في الفئة العمرية من يوم إلى 14 عامًا تجاوزت 2600 حالة إصابة بنسبة حوالي 4% من المصابين.. مؤكداً أن نسبة الشفاء 100% ولم يتم تسجيل أي حالات حرجة أو حالات احتاجت لدخول العناية المركزة أو حالات وفاة

وأشار إلى أنّه على الرغم من أنّ كلّ الأطفال معرّضون للإصابة بعدوى كورونا، إلا أنّهم لا يمرضون بنفس معدل الأشخاص البالغين، كما أنه نادراً ما يُصاب الأطفال بأعراض شديدة عند تعرّضهم للعدوى

وحذّر أولياء الأمور من التهاون في تطبيق الإجراءات الوقائية للأطفال ركوناً إلى أن الأطفال هم أقلّ الفئات إصابة بالمرض على مستوى العالم وفي قطر.. موضحاً أنّ التخلي عن الإجراءات الاحترازية المطلوبة مثل عدم خروجهم من المنزل، قد يؤدي لارتفاع معدلات الإصابة بينهم

وأكد أنّ مركز طوارئ الأطفال بالسد هو المخصص لاستقبال حالات الأطفال المصابين بفيروس كورونا، بالإضافة إلى دوره الطبيعي في استقبال الأطفال المصابين بأمراض أخرى، حيث تم التنسيق مع الجهات المختصة بمؤسسة حمد الطبية وعزل المبنى الجديد بمركز طوارئ السد بشكل تام، كما تمّ تجهيزه بجميع الأجهزة المطلوبة وتخصيص غرف للعناية المركزة تضم كافة الأجهزة التي يحتاجها أيّ طفل، كما تمّ تحديد عددٍ من الأطقم الطبية المطلوبة من أطباء استشاريين واختصاصيين وأطقم تمرريض وفنيين للاهتمام بهذه الفئة من الأطفال وأخذ الاستعدادات اللازمة لهذه الحالات

وقدم عدّة نصائح لأولياء الأمور لاتباعها لحماية الأطفال من خطر الإصابة بفيروس كورونا، منها الحرص على تعقيم الأسطح التي يستخدمها الأطفال مثل أجهزة الكمبيوتر والجوال والكراسي، وتعليم الأطفال ضرورة ترك مسافة بينهم وبين أيّ شخص يتعاملون معه لمنع انتقال العدوى، وعدم لمس الحيوانات أو التعامل معها في الشارع والبعد عن الأماكن المزدحمة قدر الإمكان، وتعليم الطفل كيفية غسل اليدين باستمرار بالماء والصابون، خاصة بعد اللعب وملامسة الأسطح، بالإضافة إلى غسلها أيضاً قبل تناول الطعام.

Gender category Male main dominant characters

NLP extract gender information results

30/06/2020	2020	Jun	146761.txt	MALE
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Newspaper article

أعلنت اللجنة المنظمة لسباق الهجن أنه تقرر (بدء التفاحيم)، والعودة للعمل بنظام التفاحيم بالدورتين (4 كم – الـ 6 كم) بميداني (الشيخاتية الجنوبي لبصير الشمالي)، وذلك اعتبارا من يوم غد /الاربعاء/، وإعادة العمل بهما بعد فترة التوقف (تطبيقا للإجراءات الاحترازية التي اتخذتها الدولة للحد من انتشار فيروس كورونا (كوفيد- 19

وأشارت اللجنة المنظمة لسباق الهجن الى أنها تهيب بجميع المشاركين الالتزام بنظم وقوانين تفاحيم الهجن وذلك لحسن سير العملية التنظيمية للتفاحيم والالتزام بجميع الإجراءات الاحترازية ومنها ضرورة ارتداء كمامة الوجه، والتباعد بين (الأشخاص في منطقة (البداية- النهاية

وأكد السيد عبدالله بن محمد الكواري نائب رئيس اللجنة المنظمة لسباق الهجن أن كافة التدابير الوقائية والاجراءات الاحترازية يتم تطبيقها من خلال اللجنة المنظمة لسباق الهجن بالتنسيق الكامل مع اللجنة العليا لإدارة الازمات، وهو أمر طبيعي لأن من المنطقي أن يتم منح أهل الاختصاص الدور لتحديد الالتزامات والمعايير التي يجب على الجميع ان يلتزم بها.. موضحا أن مراحل التسنين والترصيص والتشبيه انطلقت وسارت بشكل رائع من خلال استخدام وسائل التواصل عن بعد بين الملاك والمضمرين من جانب واللجنة المنظمة لسباق الهجن من جانب آخر، وذلك منعا للزحام والتواجد بكثرة في مقر اللجنة وهو أمر ممنوع وفقا للإجراءات الاحترازية

وأشار نائب رئيس اللجنة المنظمة لسباق الهجن الى أن النظام الجديد وفر الجهد والوقت على الطرفين، فقد قام الملاك والمضمرين بتحديد المواعيد التي يرغبون فيها حتى يقوم وفد من اللجنة بزيارة عزبهم واجراء ” التسنين والتشبيه والترصيص” وتحديد الموقع ” اللوكيشن” الذي تتواجد فيه العزبة لإجراء الفحص فيها

وبالنسبة لعودة التفاحيم مرة أخرى حتى يستعد ملاك الهجن للموسم الجديد، أوضح الكواري أنها تعتبر مرحلة جديدة يتم فيها تطبيق الإجراءات الاحترازية التي اتخذتها الدولة وتم ابلاغ جميع من له علاقة بريضة الهجن وسباقاتها بهذه الإجراءات قبل فترة كافية لإجراء التفاحيم.

Gender category: Female main dominant characters

NLP extract gender information results

03/05/2020	2020	May	143345.txt	FEMALE
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Newspaper article :

نهبته مؤسسة حمد الطبية من أن المرضى الذين يعانون من ارتفاع ضغط الدم قد يكونون أكثر عرضة للإصابة بمضاعفات مرضية شديدة إذا ما أصيبوا بعدوى فيروس كورونا (كوفيد-19) ولذلك يتعين عليهم اتخاذ المزيد من التدابير الوقائية للحيلولة دون الإصابة بهذه العدوى

وقالت **الدكتورة** مواهب علي الحسن مديرة وحدة العناية المركزة بالوكالة في مستشفى القلب التابع لمؤسسة حمد أنه لم يتم معرفة على وجه التحديد لماذا يكون الأشخاص الذين يعانون من مشاكل في القلب والأوعية الدموية أكثر عرضة لمخاطر المرض الشديد الناجم عن الإصابة بفيروس (كوفيد-19)، ولكن ما هو مؤكد أن الإصابة بهذا الفيروس تشكل عبئاً ثقيلاً على الرئتين والقلب ولذلك يتعين على هذه الفئة من المرضى أخذ احتياطات إضافية لوقاية أنفسهم من هذا الوباء

وأضافت أن فيروس (كوفيد-19) يعتبر نوعاً جديداً من فصيلة فيروسات كورونا لذا ما زال الأطباء في طور التعرف على خصائصه المرضية وكيفية مهاجمته لجسم الإنسان، ولكن المعلومات الواردة من الصين، الموطن الأساسي لهذا الفيروس والوباء التي انتشر منها، تشير إلى أن الأشخاص الذين يعانون من أمراض القلب والأوعية الدموية وارتفاع ضغط الدم كانوا الأكثر معاناة من المضاعفات المرضية بعد إصابتهم بعدوى الفيروس وبالتالي يجب عليهم ممارسة أعلى درجات الحيطة والحذر للوقاية من الإصابة بهذه العدوى

وأوضحت **الدكتورة** مواهب الحسن أن ارتفاع ضغط الدم يعني أن على قلب المريض أن يعمل بشكل زائد لضخ الدم إلى مختلف أجهزة وأعضاء الجسم، ومع مرور الوقت يتسبب ارتفاع ضغط الدم في فقدان الشرايين الناقلة للدم في الجسم لمرونتها ويعرضها للتضييق مما يجعل المريض عرضة لمخاطر الإصابة بالنوبة القلبية

ولفتت إلى أنه رغم ذلك لا ينبغي لمرضى ارتفاع ضغط الدم أن يجزعوا ولكن عليهم اتباع نصائح الأطباء واتخاذ المزيد من (التدابير الوقائية ضد فيروس كورونا (كوفيد-19)

وقالت إنه من الطبيعي أن يشعر الناس بالقلق خاصة إذا كانوا يعانون من أمراض كامنة أو مزمنة، ولكن على مرضى ارتفاع ضغط الدم اتباع الإرشادات الخاصة بمكافحة العدوى بفيروس كورونا (كوفيد-19) والتي تتمحور بشكل أساسي حول النظافة الشخصية والتباعد الاجتماعي، الذي يشمل تجنب الأماكن المزدحمة مثل المتاجر التي تعج بالكثير من المتسوقين، والحرص على اتباع تعليمات الطبيب، بما في ذلك أخذ الأدوية الموصوفة لهم بانتظام، كما أنه من الضروري استقاء المعلومات حول الفيروس من مصادر موثوقة مثل وزارة الصحة العامة ومنظمة الصحة العالمية

وأشارت **الدكتورة** مواهب الحسن إلى أن هناك بعض الاحتياطات البسيطة التي يمكن لأي شخص تطبيقها للوقاية من الإصابة بفيروس كورونا (كوفيد-19) والتي من بينها تجنب مخالطة الأشخاص الذين تبدو عليهم علامات المرض وغسل اليدين جيداً بالماء والصابون لمدة عشرين ثانية على الأقل، وتجنب ملامسة الفم والأنف والعينين بيدين غير نظيفتين، وتنظيف الأسطح التي تكثر ملامستها مثل مقابض الأبواب، ومقود قيادة السيارات، ومفاتيح الإضاءة الكهربائية وغيرها.

Gender category: Female main dominant characters

NLP extract gender information results

03/07/2018	2018	Jul	102272.txt	FEMALE
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Newspaper article

أعلن المجلس القطري للتخصصات الصحية التابع لوزارة الصحة العامة عن تخفيض الإطار الزمني المعتمد لإصدار وتجديد تراخيص مزاولي المهنة الخاصة بالممارسين الصحيين، وذلك في إطار تحقيق الأهداف الاستراتيجية للمجلس والتي تنعكس إيجابياً على كل من الممارسين وأصحاب المنشآت الصحية.

ووفقاً لذلك سيتم تخفيض الإطار الزمني لمنح الترخيص الطبي مروراً بجميع المراحل خلال مدة لا تتجاوز الشهر من تاريخ التقديم، حيث سيكون الإطار الزمني المعتمد لاستكمال طلبات التقييم 15 يوم عمل، بدلاً من 25 يوم عمل، بالإضافة إلى استكمال طلبات منح الترخيص الدائم خلال 10 أيام عمل بدلاً من 20 يوم عمل، وكذلك تقليل الإطار الزمني لاستكمال طلبات تجديد الترخيص لـ 7 أيام عمل بدلاً من 15 يوم عمل.

ومن المقرر أن يعلن مجلس التخصصات الصحية خلال الشهور القليلة المقبلة عن منح الترخيص من خلال خدمة المسار السريع التي تستغرق 7 أيام عمل في حال التقدم بطلب متكامل ومستوفى جميع الشروط.

وقالت **الدكتورة** سمر أبو السعود **الرئيسة** التنفيذية بالوكالة للمجلس القطري للتخصصات الصحية، إن المجلس يقوم بأعمال المراجعة والتدقيق بشكل دوري للتأكد من تطبيق الأنظمة واللوائح المنصوص عليها، وذلك لضمان حسن سير العمل والارتقاء إلى مستوى متميز أداء وجودة طبقاً للمعايير المعتمدة عالمياً.

الجدير بالذكر أن المجلس القطري للتخصصات الصحية تم إنشاؤه لتنظيم عمل الممارسين الصحيين الراغبين في العمل بدولة قطر، وذلك للارتقاء بمستويات الخدمات الصحية المقدمة لضمان سلامة المرضى، واعتماد سياسات موحدة من قبل المجلس بغض النظر عن أصل الشهادات أو المواطن الخاص بالممارس الصحي.

Data preprocessing

```
import gensim
from gensim.models import LdaModel, LdaMulticore
from gensim import corpora
from gensim.utils import simple_preprocess
from gensim.parsing.preprocessing import remove_stopwords
import os
import pandas as pd
from gensim.test.utils import datapath
import requests
import json
import time
import re

# Grab all Filenames
my_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21"
all_files = os.listdir(my_dir)
filenames = []

filenames = [i for i in all_files if i.endswith('.txt')]
filenames = [os.path.join(my_dir, file) for file in filenames]
files = [x.split('/')[-1] for x in filenames]

# segmentation Farasa
url = 'https://farasa.qcri.org/webapi/segmentation/'
api_key = "YQAqzfGvTZHaVPDTaL"
data_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21"
target_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lemmatized/segmented"

not_processed = []

for file in os.listdir(data_dir)[10:]:
    print(f"Processing {file}...")

    new_file = open(os.path.join(target_dir, file), 'w', encoding='utf-8')

    with open(os.path.join(data_dir, file), 'r', encoding='utf-8') as f:
        text = f.read().split("TEXT:")[1]

    # remove all unnecessary characters:
    text = re.sub('[^\w\s]', '', text)
    payload = {'text': text, 'api_key': api_key}
    data = requests.post(url, data=payload)
```

```

if data.status_code != 200:
    not_processed.append((file, data.status_code))
    continue

    result = json.loads(data.text)
    seg_text = result['text'] # a list
    seg_text = " ".join(seg_text)
    new_file.write(seg_text)
new_file.close()
print()

#lemmatization Farasa
url = 'https://farasa.qcri.org/webapi/lemmatization/'
api_key = "YQAqzfGvTZHaVPDTaL"
data_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21"
target_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lemmatized"

not_processed = []

for file in os.listdir(data_dir)[10:]:
    print(f"Processing {file}...")

    new_file = open(os.path.join(target_dir, file), 'w', encoding='utf-8')

    with open(os.path.join(data_dir, file), 'r', encoding='utf-8') as f:
        text = f.read().split("TEXT:")[1]

        # remove all unnecessary characters:
        text = re.sub('[^\w\s]', '', text)
        payload = {'text': text, 'api_key': api_key}
        data = requests.post(url, data=payload)

    if data.status_code != 200:
        not_processed.append((file, data.status_code))
        continue

        result = json.loads(data.text)
        seg_text = result['text'] # a list
        seg_text = " ".join(seg_text)
        new_file.write(seg_text)
    new_file.close()
    print()

```

```
# Get all Stopwords
```

```
file = open('/Users/reemalkuwari/Desktop/Al Raya 2004-2021/list.txt', 'r')  
stopwords = [c.replace('\n', '') for c in file.readlines()]
```

```
# Extract all text from text files
```

```
documents = []
```

```
for filename in filenames:
```

```
    file = open(filename, 'r', encoding="utf-8")
```

```
    current_doc = ""
```

```
    for line in file:
```

```
        if line.startswith("URL:") or line.startswith("TITLE:") or line.startswith("بقلم") or  
line.startswith("كتب"):
```

```
            continue
```

```
            line = line.replace("TITLE:", "").replace("TEXT:", "").split()
```

```
            line = [i for i in line if i not in stopwords]
```

```
            current_doc += ' '.join(line)
```

```
documents.append(current_doc)
```

```
print('There are {} Documents in total\n'.format(len(documents)))
```

Create Initial LDA Model from all texts

```
import gensim
```

```
from gensim.models import LdaModel, LdaMulticore
```

```
from gensim import corpora
```

```
from gensim.utils import simple_preprocess
```

```
from gensim.parsing.preprocessing import remove_stopwords
```

```
import os
```

```
import pandas as pd
```

```
from gensim.test.utils import datapath
```

```
import requests as rq
```

```
import json
```

```
import time
```

```
STOPWORDS = []
```

```
with open('/Users/reemalkuwari/Desktop/Al Raya 2004-2021/list.txt', 'r') as f:
```

```
    for line in f:
```

```
STOPWORDS.append(line.strip())
```

```
data_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lemmatized/"
```

```
docs = []  
doc2id = {}
```

```
for doc_id, file in enumerate(os.listdir(data_dir)):  
    with open(data_dir + file, 'r') as f:  
        doc = f.read().strip()  
        doc = doc.split()  
        doc = [word for word in doc if word not in STOPWORDS]  
        doc = [word for word in doc if all(char.isalpha() for char in word)]  
        docs.append(doc)  
        doc2id[doc_id] = file
```

Create the LDA model

```
mydict = corpora.Dictionary()  
mycorpus = [mydict.doc2bow(doc, allow_update=True) for doc in docs]
```

```
lda = gensim.models.ldamodel.LdaModel  
number_of_topics = 40  
ldamodel = lda(mycorpus, num_topics=number_of_topics, id2word=mydict, passes=20)
```

Save the model

In [9]:

```
#from gensim.test.utils import datapath  
# Save model to disk.  
#save_directory = 'Users/reemalkuwari/Desktop/Al Raya 2004-2021/LDAmodel'  
#save_directory = ('/Users/reemalkuwari/Desktop/Al Raya 2004-2021/LDAmodel/LDAV1')  
#file = datapath(save_directory)  
#ldamodel.save(file)
```

The list of all topics

```
save_directory = '/Users/reemalkuwari/Desktop/Al Raya 2004-2021/LDAmodel/LDAV1'  
ldamodel = LdaModel.load(save_directory)
```

```
save_directory = '/Users/reemalkuwari/Desktop/Al Raya 2004-  
2021/LDAmodel/LDAV1.id2word'  
mydict = corpora.Dictionary.load(save_directory)  
mycorpus = [mydict.doc2bow(doc, allow_update=True) for doc in docs]
```

```
topics_data = []
```

```
for topic_id in range(number_of_topics):
    topic_data = {'words': [], 'prob': []}
    for word, prob in ldamodel.get_topic_terms(topic_id):
        word = mydict[word]
        topic_data['words'].append(word)
        topic_data['prob'].append(prob)
    topics_data.append(topic_data)
```

```
topics_df = pd.DataFrame.from_dict(topics_data)
topics_df.to_csv('topics_data.csv')
```

Extract the topics (gamma) for each document

```
doc_lda = ldamodel[mycorpus]
number_of_docs = len(doc_lda)
doc_topic_data = []
```

```
for i in range(number_of_docs):
    doc_id = doc2id[i]
```

```
    topic_data = {}
    topic_data["doc id"] = doc_id
```

```
    for t in range(number_of_topics):
        t = "topic " + str(t)
        topic_data[t] = 0
```

```
    doc_topics = doc_lda[i]
    for topic, gamma in doc_topics:
        topic = "topic " + str(topic)
        topic_data[topic] = gamma
    doc_topic_data.append(topic_data)
```

```
doc_topic_df = pd.DataFrame.from_dict(doc_topic_data)
doc_topic_df.to_csv("document_topic_data.csv")
```

Visualize

```
import pyLDAvis
import pyLDAvis.gensim_models
```

```
pyLDAvis.enable_notebook()
vis = pyLDAvis.gensim_models.prepare(ldamodel, mycorpus, mydict, sort_topics=False)
vis
```

Sort Texts into their Topics

```
# Get distinct topics from LDA Model
topics = ldamodel.print_topics(num_topics=number_of_topics)

file_categories = {}

# Open the individual text files
for f in filenames[:50]:
    file = open(f, 'r').read()
    text = file.split()
    text = [' '.join(simple_preprocess(i)) for i in text if i not in stopwords]

# Place each text file into a distinct category
new_text_corpus = mydict.doc2bow(text)
result = ldamodel.get_document_topics(new_text_corpus)
majority = max(result, key=lambda a : a[-1])
file_categories[f] = majority[0]

# Save a CSV File with the filenames and their topics
topic_storage = pd.DataFrame()
topic_storage['filename'] = file_categories.keys()
topic_storage['topic_no'] = file_categories.values()
topic_storage.to_csv('FileDatatopic.csv', index=False)
print('CSV file written with {} distinct topics'.format(number_of_topics))
time.sleep(3)
```

Coherence

```
import gensim
from gensim.models import LdaModel, LdaMulticore
from gensim import corpora
from gensim.utils import simple_preprocess
from gensim.parsing.preprocessing import remove_stopwords
import os
import pandas as pd
from gensim.test.utils import datapath
import requests as rq
import json
from gensim import models
from gensim.models import TfIdfModel
```

```
from gensim.models import CoherenceModel
from matplotlib import pyplot as plt
```

Preprocess

```
STOPWORDS = []
with open('/Users/reemalkuwari/Desktop/Al Raya 2004-2021/list.txt', 'r') as f:
# with open('../lists/list.txt', 'r') as f:
    for line in f:
        STOPWORDS.append(line.strip())
data_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lemmatized/"
docs = []
doc2id = {}

for doc_id, file in enumerate(os.listdir(data_dir)):
    with open(data_dir + file, 'r') as f:
        doc = f.read().strip()
        doc = doc.split()
        doc = [word for word in doc if word not in STOPWORDS]
        doc = [word for word in doc if all(char.isalpha() for char in word)]
        docs.append(doc)
        doc2id[doc_id] = file
```

Build dictionary and corpus

```
mydict = corpora.Dictionary()
mycorpus = [mydict.doc2bow(doc, allow_update=True) for doc in docs]
```

Create LDA model for each number of topics

```
# change the parameters if needed
```

```
START = 20
```

```
STOP = 51
```

```
STEP = 2
```

```
list(range(START, STOP, STEP))
```

```
save_directory = '/Users/reemalkuwari/Desktop/Al Raya 2004-2021/LDAmodel/MODELS/'
# save_directory = 'LDAmodel/'
```

```
coherence_file = open(save_directory + "coherence.csv", 'w')
coherence_file.write("number of topics,coherence\n")
```

```
for num_topics in range(START, STOP, STEP):
```

```
    print(f"Creating a model with {num_topics} topics...")
```

```

lda = gensim.models.ldamodel.LdaModel
ldamodel = lda(mycorpus, num_topics=num_topics, id2word=mydict, passes=20)

lda_dir = save_directory + "lda_" + str(num_topics)
print(f"Model created. Writing into the file {lda_dir}...")
ldamodel.save(lda_dir)

print("Calculating model coherence... ")
coherencemodel = CoherenceModel(ldamodel, texts=docs, dictionary=mydict,
coherence='c_v')
ch = coherencemodel.get_coherence()
print(f"Done. Coherence = {ch}.")
coherence_file.write(str(num_topics) + "," + str(ch) + "\n")
print()
print()

coherence_file.close()

```

Plotting

```
coherence_file = save_directory + "coherence.csv"
```

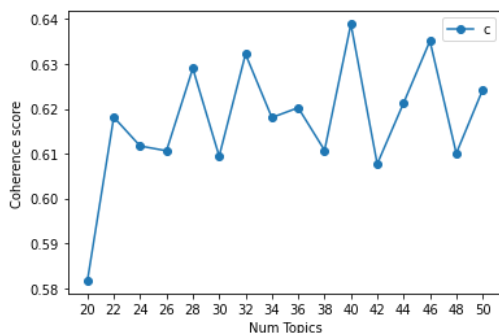
```
coherence_data = pd.read_csv(coherence_file)
coherence_data
```

Plot

```
x = coherence_data['number of topics']
y = coherence_data['coherence']
```

```
fig, ax = plt.subplots()
ax.set_xlabel("Num Topics")
ax.set_ylabel("Coherence score")
ax.plot(x, y, '-o')
ax.legend(("coherence_values"), loc='best')
ax.set_xticks(x)
fig.savefig(save_directory + "coherence_plot.jpg")
fig.show()

```



Extract gender information

```
import os
import pandas as pd

data_dir = '/Users/reemalkuwari/Desktop/Al Raya 2004-2021/segmented/'
MALE_WORDS = []
with open("/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lists_segmented/male_title_seg.txt", 'r') as f:
    for line in f:
        MALE_WORDS.append(line.strip())

FEMALE_WORDS = []
with open("/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lists_segmented/female_title_seg.txt", 'r') as f:
    for line in f:
        FEMALE_WORDS.append(line.strip())
data = []

for file in os.listdir(data_dir):
    with open(data_dir + file, 'r') as f:
        text = f.read().split()

        female_words = [word for word in text if word in FEMALE_WORDS]
        male_words = [word for word in text if word in MALE_WORDS]

        # data about a specific text
        counts = {}
        counts['file'] = file
        counts['female counts'] = len(female_words)
        counts['male counts'] = len(male_words)
        counts['female words'] = female_words
        counts['male words'] = male_words

        data.append(counts)
df = pd.DataFrame.from_dict(data)
```

Assign labels to each file

- The articles mention both genders mostly equally (e.g. 50% men, 50% women or 60% women, 40% men). This article will be labelled as both genders article.

- The articles mention one gender more than the other (e.g. 80% men, 20% women). This article will be labelled as both men article vice versa. In other words, what determines the gender of the article is its dominant character. If the percentage of the dominant character is 80% or above, the articles will be labelled for this gender.

```
df['label'] = ""
df['total'] = df['female counts'] + df['male counts']
df['female perc'] = df['female counts'] / df['total'] * 100
df['female perc'] = df['female perc'].fillna(0)
```

```
both_genders = (df['female perc'] <= 70) & (df['female perc'] >= 30)
female = df['female perc'] > 60
male = df['female perc'] < 40
```

```
df.loc[both_genders, "label"] = 'BOTH'
df.loc[male, "label"] = 'MALE'
df.loc[female, "label"] = 'FEMALE'
df.loc[df['total'] == 0, 'label'] = 'NONE'
```

```
df.to_csv("/Users/reemalkuwari/Desktop/Al Raya 2004-2021/gender_counts.csv",
index=False')
```

Merge gender data with topic data

```
doc_df = pd.read_csv("/Users/reemalkuwari/Downloads/document_topic_data.csv")
topic_df = pd.read_csv("/Users/reemalkuwari/Downloads/topics_data.csv")
gender_df = pd.read_csv("/Users/reemalkuwari/Desktop/Al Raya 2004-2021/gender_counts.csv")
```

```
doc_df.drop(columns=['Unnamed: 0'], inplace=True)
gender_df.drop(columns=['Unnamed: 0'], inplace=True)
```

```
label_df = pd.DataFrame(data=gender_df[['file', 'label']])
```

```
merged_df = doc_df.merge(label_df, left_on='doc id', right_on='file', how='left')
merged_df.drop(columns="file", inplace=True)
```

```
cols = ['doc id', 'label', 'topic 0', 'topic 1', 'topic 2', 'topic 3', 'topic 4',
'topic 5', 'topic 6', 'topic 7', 'topic 8', 'topic 9', 'topic 10',
'topic 11', 'topic 12', 'topic 13', 'topic 14', 'topic 15', 'topic 16',
'topic 17', 'topic 18', 'topic 19', 'topic 20', 'topic 21', 'topic 22',
'topic 23', 'topic 24']
```

```
merged_df.to_csv('/Users/reemalkuwari/Desktop/Al Raya 2004-2021/LDA+split/merged
data.csv', index=False, columns=cols)
```

Transform merged_df into long format

```
melted_df = merged_df.melt(id_vars=['doc id', 'label'], var_name='topic',
value_name='gamma')
melted_df = melted_df.sort_values(by=['doc id'])
melted_df.head(3)
```

```
# remove topics with 0 gamma
```

```
melted_df.loc[melted_df['gamma'] == 0, 'gamma'] = np.NaN
melted_df.dropna(subset=['gamma'], inplace=True)
```

For each document, select the topic with the highest gamma

```
def take_max(group):
    return group.loc[group['gamma'] == group['gamma'].max(), ['label', 'topic']]
```

```
best_topic_df = melted_df.groupby("doc id").apply(take_max)
best_topic_df.reset_index('doc id', inplace=True)
```

```
best_topic_df.to_csv("best_topic_by_document.csv", index=False)
```

Table with raw numbers (by topic)

```
table = pd.crosstab(best_topic_df['topic'], best_topic_df['label'])
table.to_csv("topic_by_gender.csv")
```

Table with percentages (by topic)

```
table_perc = pd.crosstab(best_topic_df['topic'], best_topic_df['label'],
normalize='index').mul(100).round(2)
table_perc.to_csv("topic_by_gender_perc.csv")
```

Analysis results:

```
Topic,Filename,Male_Count,Female_Count,Gender
```

```
5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2017-12-
27_92092.txt,0,0,NONE
```

```
5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-02-20_14780.txt,1,0,M
```

```
5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-06-
04_20972.txt,0,0,NONE
```

```
5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2019-09-
15_128424.txt,0,0,NONE
```

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2013-07-25_161859.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-08-13_25138.txt,3,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2017-01-03_72783.txt,2,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2013-08-13_162978.txt,1,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-03-31_17108.txt,1,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-08-11_25027.txt,3,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2013-01-22_141879.txt,5,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2020-04-05_141452.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-07-07_22993.txt,1,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2017-01-29_74268.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2020-11-29_154393.txt,2,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2013-08-20_163414.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2015-10-10_48903.txt,2,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2020-11-05_153277.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2013-09-05_164392.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2019-05-27_121087.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2021-05-15_169525.txt,1,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2019-07-22_124734.txt,1,0,M

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2019-07-24_124887.txt,0,0,NONE

5,/Users/reemalkuwari/Desktop/Al Raya 2004-2021/text13-21/2014-02-27_15175.txt,0,0,NONE.....

date	Year	Month	Doc	label	Subtopic
01/01/2013	2013	Jan	128196.txt	MALE	topic 4
01/01/2013	2013	Jan	128220.txt	MALE	topic 4
01/01/2013	2013	Jan	128253.txt	MALE	topic 35
01/01/2013	2013	Jan	128286.txt	BOTH	topic 17
01/01/2013	2013	Jan	128310.txt	BOTH	topic 17

01/01/2013	2013	Jan	128343.txt	MALE	topic 17
01/01/2013	2013	Jan	128367.txt	MALE	topic 17
01/01/2013	2013	Jan	128400.txt	MALE	topic 18
01/01/2013	2013	Jan	128433.txt	MALE	topic 4
01/01/2013	2013	Jan	128457.txt	MALE	topic 4
01/01/2013	2013	Jan	128490.txt	MALE	topic 1
01/01/2013	2013	Jan	128514.txt	MALE	topic 20
01/01/2013	2013	Jan	128547.txt	MALE	topic 12
01/01/2013	2013	Jan	128577.txt	MALE	topic 4
01/01/2013	2013	Jan	128604.txt	MALE	topic 12
01/01/2013	2013	Jan	128637.txt	MALE	topic 31
01/01/2013	2013	Jan	128694.txt	MALE	topic 17
01/01/2013	2013	Jan	128724.txt	MALE	topic 20
01/01/2013	2013	Jan	128751.txt	MALE	topic 17
01/01/2013	2013	Jan	128784.txt	MALE	topic 38
01/01/2013	2013	Jan	128808.txt	MALE	topic 28
01/01/2013	2013	Jan	128841.txt	MALE	topic 12
01/01/2013	2013	Jan	128865.txt	MALE	topic 28
02/01/2013	2013	Jan	128979.txt	MALE	topic 35
02/01/2013	2013	Jan	129003.txt	BOTH	topic 35
02/01/2013	2013	Jan	129036.txt	BOTH	topic 4

.....
.....
.....

Word cloud

```
import os
import codecs
import pandas as pd
from wordcloud import WordCloud
import arabic_reshaper
import matplotlib.pyplot as plt
from bidi.algorithm import get_display
from random import sample

data_dir = '/Users/reemalkuwari/Desktop/Al Raya 2004-
2021/regenderinformationcode/best_topic_by_document_names.csv'

text_dir = "/Users/reemalkuwari/Desktop/Al Raya 2004-2021/lemmatized/"

STOPWORDS = []
with open("/Users/reemalkuwari/Desktop/Al Raya 2004-2021/list.txt", 'r') as f:
    for line in f:
        STOPWORDS.append(line.strip())
data = pd.read_csv(data_dir)
data = data[data['label'].isin(["MALE", 'FEMALE'])]
by_categ_by_gender = data.groupby(['topic category', 'label']).agg({'doc id': list})
by_categ_by_gender.reset_index(inplace=True)

def plot_cloud(wordcloud):
    # Set figure size
    plt.figure(figsize=(40, 30))
    # Display image
    plt.imshow(wordcloud)
    # No axis details
    plt.axis("off");

Set sample size here:
SAMPLE_SIZE = 10000

try:
    os.mkdir("wordclouds")
except FileExistsError:
    pass
from IPython.display import display

for name, group in by_categ_by_gender.groupby("topic category"):
```

```
female_docs = group.loc[group['label'] == 'FEMALE', 'doc id']
female_docs = female_docs.tolist()[0]
male_docs = group.loc[group['label'] == 'MALE', 'doc id']
male_docs = male_docs.tolist()[0]
```

```
print(f"Creating a word cloud for category \"{name}\"...")
print("\t1. Wordcloud for gender FEMALE")
```

```
categ_texts = []
```

```
try:
```

```
    select_files = sample(female_docs, SAMPLE_SIZE)
```

```
except ValueError:
```

```
    select_files = female_docs
```

```
for file in select_files:
```

```
    try:
```

```
        with open(text_dir + file, 'r') as f:
```

```
            f = f.read().split()
```

```
            words = [word for word in f if word not in STOPWORDS]
```

```
            categ_texts.extend(words)
```

```
    except FileNotFoundError:
```

```
        continue
```

```
categ_texts = " ".join(categ_texts)
```

```
categ_texts = arabic_reshaper.reshape(categ_texts)
```

```
categ_texts = get_display(categ_texts)
```

```
wordcloud = WordCloud(font_path='NotoNaskhArabic-Regular.ttf',
                      width = 2000,
                      height = 1000, random_state=1,
                      background_color='white', colormap='Set2',
                      collocations=False).generate(categ_texts)
```

```
# Plot
```

```
plot_cloud(wordcloud)
```

```
wordcloud.to_file('wordclouds/' + name + "_FEMALE.png")
```

```
print("\t1. Wordcloud for gender MALE")
```

```
categ_texts = []
```

```
try:
```

```
    select_files = sample(male_docs, SAMPLE_SIZE)
```

```
except ValueError:
```

```
    select_files = male_docs
```

```
for file in select_files:
```

```
    try:
```

```
with open(text_dir + file, 'r') as f:
    f = f.read().split()
    words = [word for word in f if word not in STOPWORDS]
    categ_texts.extend(words)
except FileNotFoundError:
    continue

categ_texts = " ".join(categ_texts)
categ_texts = arabic_reshaper.reshape(categ_texts)
categ_texts = get_display(categ_texts)

wordcloud = WordCloud(font_path='NotoNaskhArabic-Regular.ttf',
    width = 2000,
    height = 1000, random_state=1,
    background_color='white', colormap='Set2',
    collocations=False).generate(categ_texts)
# Plot
plot_cloud(wordcloud)
wordcloud.to_file('wordclouds/' + name + "_MALE.png")
```