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Refugee women in the media – prevalence, representation and framing in international media coverage

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ABSTRACT

Are refugee women invisible in the media? Extant media portrayals often make use of stereotypical representations, in that women are represented as vulnerable and passive victims. Within the theoretical frameworks of agenda setting and framing, vulnerability and agency, digital emotion contagion and distant suffering, this study investigates media coverage on refugee women by four popular international news outlets on the basis of their YouTube presence from 2011 to 2021. We applied automated data gathering to extract relevant videos which were manually coded and analyzed. In addition, we applied an automated topic modeling and sentiment analysis. The results are ambiguous but in general reflect existing findings: refugee women are marginalized in media coverage, and their portrayal is often stereotypical presenting them as vulnerable victims. The results highlight the need to sensitize journalists for a non-stereotypical reporting and the broader public for a more critical stance towards media coverage of refugee women.

Starting point: underrepresentation of refugee women in media

Refugee crises are global humanitarian issues. The Global Trends Report estimated a total of 103 million people forcibly displaced worldwide, of which approximately 76% come from only six countries: the Syrian Arab Republic, Venezuela, Ukraine, Afghanistan, South Sudan, and Myanmar (UNHCR 2022b). A significant number of refugees in Europe is comprised of women and girls. They make up around 50% of any refugee, internally displaced, or stateless population (UNHCR 2022a). In some countries of origin, gender-specific repressive social norms restrict civil freedoms. Considering the general powerlessness of women in certain cultures, refugee women are at risk of facing gender-based persecution (Shuman and Bohmer 2014). Estimates show that every 1 in 5 refugee women has experienced some form of sexual violence (Vu et al. 2014). With their gender and social situation, refugee women face a double disadvantage. The topic of forced migration and refugees is a key policy issue in European politics, and

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the media play a significant role in shaping public perceptions (Berry, Garcia-Blanco, and Moore 2016; Blinder and Jeannet 2014; Eberl et al. 2018; Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021). Research shows that migrants are under-represented in the media when compared to the share they hold in the respective population and often portrayed either as victims or as economic, security or cultural threat (e.g. Eberl et al. 2018; Greussing and Boomgaarden 2017). In addition, migrants and refugees often do not get a voice of their own in the reports but are described as 'hordes' or 'masses' (Eberl et al. 2018, 214), which further marginalizes them and their concerns. This is especially true for women, who are even less visible than men (Fengler and Kreutler 2020; Ryan and Tonkiss 2023). In research on news about migration-related topics, research on female migrants and refugees is still largely missing (Eberl et al. 2018).

To develop a clear understanding of the public discourse about refugee women, it is important to identify this discourse in the mainstream media and its influence on public debates. Therefore, the primary objective of this article is to advance the understanding of how prominent news channels portray refugee women and their issues, and how audiences respond to such depictions.

Our overarching research questions are:

1. How prevalent are refugee women in international news broadcasters' YouTube videos on refugees?
2. How are refugee women and their issues represented by these channels?
3. Which sentiments prevail in the comments to such representations?

Our analysis is built on a content analysis of reports (plus corresponding comments) of the YouTube channels of Al Jazeera, BBC, CNN and Sky News in the period of 2011–2021. In this article, we will, firstly, lay out the state of research with regard to media presentations of female refugees in relation to our theoretical frameworks of (1) agenda setting and framing, (2) agency and vulnerability, and (3) digital emotion contagion and distant suffering. Secondly, we give insights into our research design describing data sampling and manual as well as automated content analysis, before we, thirdly, present and discuss the results of our study. Finally, we conclude with a reflection of strengths and weaknesses of our research and the impact on media institutions it might entail.

Key concepts in media analysis of refugee women

(1) Agenda Setting and Framing

To make statements about the salience and representation of issues in media, agenda setting and framing are among the central concepts in research. As Eberl et al. (2018, 208; emphasis in original) note, '[w]hile the first strand is based on the classical assertion that news tells us *what* to think about, the second argues that news also tells us *how* to think about things'. Both concepts refer to the salience of information, i.e. which topics are (not) set on the agenda and how they are contextualized, for example by focusing on the problem definition, causal interpretation, moral assessment, or treatment

recommendation, to reference Entman (1993). In this sense, attribution of responsibility is also a part of framing. This theoretical concept goes back to, among others, Kelley's (1973) work and asks about causal explanations and blame attributed to humans, organizations, or entities. In the context of refugee coverage, one might ask, who is held responsible for a conflict (e.g. in home, transit or host country) by the media.

At irregular intervals, the topic of migration is one of the most controversial issues in politics and the public sphere: 'While the number of refugees coming to Europe fluctuates from year to year, the refugee crisis has become a central point of political discourse across the region since it erupted in the early 2010s' (Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021, 283).[1] The authors point out that 'the news media have been one of the main vehicles influencing public opinion about the refugees' (Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021, 283). Various studies have shown that opinions and attitudes are co-shaped, among other things, by media coverage (Blinder and Jeannet 2014; Eberl et al. 2018; Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021). Iyengar (1993) emphasized that the amount of news coverage on a certain issue is considered to be responsible for the degree of issue salience in recipients' discourse. Thus, agenda setting cannot only describe the priority of topics in the media (i.e. on the media agenda) but also among recipients (i.e. on the audience agenda). In addition, agenda building, i.e. 'a process through which the policy agendas of political elites are influenced by a variety of factors, including media agendas and public agendas' (Rogers and Dearing 2007, 81), plays an important role. Langer and Gruber (2021) show for example, that established media organizations play an important role in the process of political agenda setting. They can intensify topics and keep them in discourse, which can ultimately lead to political pressure for action. If migrant and refugee women do not appear as actors in the media, their lived realities and needs might not rank high on the public agenda neither. Lind and Meltzer (2021, 924) speak of migrant women being 'symbolically annihilated' and state that 'only visible (women) migrants are qualified to identify (women) migrant problems and to construct them in the public and political agenda' (2021, 936). A study of print media in Europe shows that on average only 27% of news pieces on refugees or migrants mention women; looking at all people mentioned in the news articles, refugee women made up only 6% of them (Pierigh and Speicher 2017).

Lind and Meltzer (2021) note gaps in the existing literature regarding the salience of (refugee or migrant) women compared to men and, in general, how their visibility changes over time. The authors examine migrant women's salience in German news coverage in print and online articles using a dictionary approach.[2] A key finding of their research is that migrant women are salient in only 12–26% of articles regarding migration.[3] They observed an increase in visibility from 2003 to 2009 followed by a decrease in mentions of migrant women, especially during the peak of the 'refugee crisis'. Similarly, Fengler and Kreutler (2020), studying migration coverage in 17 European newspapers in a six week sample between 2015 and 2018, evidence a marginal visibility of individual female actors:

> About a quarter (26.6 per cent) of all articles presented migrants and refugees, as the main actors. They are represented much more often as large, anonymous groups (18 per cent) than as individuals (6 per cent) or small groups like families, whose members remain discernible as individuals (2 per cent). […] In absolute numbers, we found 111 articles with

individual adult or teenager migrants or refugees as main actors, 89 of which described male migrants or refugees, and only 22 of which described female migrants and refugees.

In the total of 2417 articles, government representatives were the most often mentioned main actors; individually recognizable migrants or refugees were scarce. According to Fengler and Kreutler's (2020, 41) data,

> migrants and refugees are not only under-represented in coverage, but they also rarely speak for themselves. From the 751 identifiable migrants and refugees, only 411 were directly or indirectly quoted and only 10 per cent of the articles gave a voice to the migrants and refugees themselves.

The salience of topics can be evaluated by merely counting the appearance of respective issues. To describe in a more qualitative way the focus and issue interpretation of an article, framing analysis is necessary. The framing concept embraces the basic idea that topics can be presented and defined differently by selecting and emphasizing certain aspects of reality (Baden 2020). We can consider frames as narrative interpretive schemata or classification frameworks. In general, academic studies about the representation of refugee women usually combine salience/visibility and framing aspects but seldom include a gender-analytical or intersectional perspective. Whenever refugee women are mentioned, the depiction is often stereotypical in ways that show them as disadvantaged, helpless and victimized (e.g. Alhayek 2014; Elle and Hess 2018; Haider, Olimy, and Al-Abbas 2021). In general, the victimization frame is one of the most common frames, especially in the European context, when it comes to women, refugees or asylum seekers (Eberl et al. 2018). In consequence, media's reporting influences people's thoughts, perceptions, and attitudes (Iyengar and Kinder 2010), but the realities of refugee women are rarely recorded.

There are multiple rationales with regard to the limited presence of refugee women in the media. Host countries' perceptions of the religious background of migrants and refugees play a significant role in the (in)visibility of refugee women in the media and their way of representation as 'non-agents'. Studies on Muslim women as a specific group of migrants (or to a much lesser extent refugees) make up a large part of the research on the portrayal (i.e. framing) of migrant women in the media (for example the literature review by Lünenborg and Bach 2009 for the German and international research landscape). Research findings show that Muslim migrant women, who make up a much-noted group in Western media-migrant research, are often embodied as religious and cultural foreignness and threat (Lünenborg and Bach 2009). The veil or headscarf functions as a symbolic marker of religious belonging and symbolizes cultural 'otherness'. This is in line with a general rhetoric of media coverage on refugees, especially in Europe.

Taking into account the aforementioned concepts and studies, we hypothesize and ask:

H1: Videos about refugee women will make up a low proportion of all videos about refugees.

RQ1: Which topics/conflicts, ethnic groups/countries will be featured most prominently in the reports?

RQ2: Who is held responsible for the conflicts in the home/transit/host country?

(2) Agency and Vulnerability

Closely related to framing are the concepts of agency and vulnerability. As many studies mentioned above have shown, specifically female refugees are portrayed as victims: vulnerable and heteronomous. According to Aldridge (2014, 113), the term *vulnerability* 'is mainly used to denote susceptibility to harm or risk, or as an indicator of enhanced need'. Liamputtong (2007, 194) classifies vulnerable individuals as 'marginalised and discriminised in society due to their social positions based on class, ethnicity, gender, age, illness, disability and sexual preferences'. Due to an interplay of various risks female refugees show an intersectional vulnerability with regard to gender, class respectively social status, and ethnicity. Being vulnerable is similar to being bereft of agency and power, a lack of opportunities for participation and a need for protection derived from this. Often, vulnerability appears in a certain social or geopolitical context, e.g. in home country, transit or host country, adding 'situational vulnerability' to 'structural vulnerability' (Gilodi, Albert, and Nienaber 2022). Refugees experience powerlessness as they have limited participation options, e.g. due to social justice problems, poverty, or social recognition. Paternalism is another key concept that sometimes goes hand in hand with vulnerability on the other side as it describes the limits of autonomy set by someone feeling superior, including an 'interference with a person's liberty' (Barnett 2011, 105). As female refugees are often confronted with paternalistic treatment and find themselves in a disadvantaged position facing structural and personal constraints, they can be expected to be portrayed as dependent, helpless, passive, economically deprived and heteronomous. They live at the margins of the social system, exposed to harm and discrimination.

Many studies indicate that there are gendered patterns and stereotypical depictions in media representations of migrant and refugee women. Del Zotto (2002), for example, conducted a contextual and visual framing analysis of several international news items from broadcasters and newspapers on women during the Kosovo conflict. In those reports, refugee women either appear in mass scenes ('body count narratives') or are framed as singular victims ('human interest narrative') (Del Zotto 2002, 145). She concludes that the gendered news coverage, including the 'black-out' of women's experiences and bias towards a paternalistic framework, reveals a 'masculinist paradigm of war' (Del Zotto 2002, 149) that places women in passivity and homogeneity.

As vulnerability goes along with the inability of certain (groups of) people to represent their own interests (in comparison to other groups or individuals of the community), policy makers have to be more cautious about the needs and concerns of persons of diminished autonomy. Quests for agency, in this context, stand in contrast to frames of victimization, paternalism and vulnerability; agency is understood as 'a capacity to act or cause change' (Gunn 2009, 27), including consciousness, resources and power to reach this goal. Female refugees face structural constraints (e.g. in refugee camps) and loss of status and non-recognition of qualifications (in host countries [Hunt 2008]), are not well equipped with resources, not allowed to enter the labor market, rely on the charity of others; in sum a 'lack of self-determination' (Hunt 2008, 286). Emirbayer and Mische (1998) stress the importance of the temporal-relational contexts that influence how an individual can express agency in times of changing constraints and resources.

Despite the mentioned restrictions of agency, refugee women at certain times have some leeway in autonomously shaping their lives, which is often neglected as a media topic. Some women become economically independent, they (re)gain strength and courage to become shapers of their lives. Many link themselves with others and thereby build networks and an environment of supportive structures and opportunities (Hunt 2008). By exerting agency such as consumption and education practices or employment, they autonomously change their structural contexts, participate in decision-making processes and play an active part in society. Hunt (2008) describes their different roles of agency with adjectives such as 'caring or supportive' (287) and 'active or integrative' (288).

Haider, Olimy, and Al-Abbas (2021) show in a five year comparison of articles from news agencies of Lebanon and Jordan that the portrayal of Syrian refugee women echoed around the topics of burden, suffering, vulnerability, sexual exploitation, but also on impact on the local female community, awareness-raising, making a living, and support. If the focus is too strongly on the role of the victim, the agency of women is not evident. Alhayek (2014) shows that this also applies to online activist media campaigns: The Facebook discourse on the issue of forced marriages of Syrian refugees in Jordan reinforced orientalist representations in line with Western hegemonic discourse and therefore marginalized the female refugees' realities. The recognition and representation of refugee women's own agency is not only considered differently in different types of media and countries, it also varies over time (Narlı, Özaşçılar, and Turkan Ipek 2020).

With regard to the extant research in the field of representation of refugee women in the news, we formulate the following two hypotheses:

H2: Refugee women will be represented as vulnerable victims.
H3: There will be few reports attributing agency to refugee women.

(3) Digital Emotion Contagion and Distant Suffering

Our third strand of research looks at digital emotion contagion (Goldenberg and Gross 2020), a concept based on works by Hatfield, Cacioppo, and Rapson (1993). It means that people who spend much time on digital media are 'exposed to expressions of emotion by other people. This exposure can lead their own emotion expressions becoming more similar to those of others' (Goldenberg and Gross 2020, 316). Researchers have analysed this effect for social networks such as Facebook (Kramer, Guillory, and Hancock 2014) and Twitter (Ferrara and Yang 2015) which is why we assume that it might be applicable for YouTube as well when comparing the emotions conveyed by the video to those in the comment section. Few studies on the effects of negative media portrayals of immigrants (Conzo et al. 2021) as well as on 'refugee crisis' related ethnic insults in YouTube comments (Spörlein and Schlueter 2021) indicate contagiousness and emotional hostility. In addition to negative sentiments, we expect expressions of empathy that can be explained by the concept of distant suffering (Kyriakidou 2015). Even though many recipients (especially Western audiences) never experienced atrocities and suffering themselves, media professionals bring these to their spectators by describing and visualizing 'inconceivable pain' (Figenschou 2011, 234). This leads to 'closeness […and] strong feelings of compassion' (Figenschou 2011,

233) despite cultural and geographical distance. Kyriakidou (2015, 216) emphasizes the affective nature of distant suffering in media witnessing 'due to its relation to human vulnerability, pain and trauma'. It should be noted, however, that expressions of engagement, pity, compassion and 'feeling sorry' for the refugees depicted on the screen depend on the mode of reporting as well as on the predispositions of the viewers (Huiberts and Joye 2019, 574-576; Kyriakidou 2015, 228). In accordance with the concept of agency mentioned above (theoretical framework 2), we also expect positive sentiments for videos showing empowered and successful women. The theoretical frameworks of digital emotion contagion and distant suffering with according state of research in the field of refugee studies make us ask and expect the following:

RQ3: Which emotions will be conveyed by the reports?
H4: There will be a correlation of sentiments in both videos and user comments.

Research design

With the large increase in refugee numbers especially in the aftermath of the Syrian war, (forced) migration became a central topic of political and public discourse in European countries (Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021) and reception, and distribution of refugees continues to be a much-discussed topic. As Ozdora-Aksak, Connolly-Ahern, and Dimitrova (2021, 283) point out, 'the news media have been one of the main vehicles influencing public opinion about the refugees'. Therefore, in this study, we focused on media channels that are most widely watched in Europe and looked at videos from 2011 to 2021 to also capture flight movements before 2015. Moreover, the examination of the early representation of migration (2011–2014) 'could be a benchmark for how the media cover the issue in the future' (Ozdora-Aksak, Connolly-Ahern, and Dimitrova 2021, 283). Further, with a time period of a whole decade, we can examine representations of flight and migration over time.

Channel selection, data sampling and processing

In recent years, online media became one of the major news sources, and social media in particular is gaining more and more importance (Newman et al. 2022). Among various social networks, YouTube is the second most popular platform for news consumption in European countries after Facebook (Newman et al. 2022).

As we identified a need for comparative studies (e.g. Lind and Meltzer 2021), we built our analysis on news reports by the four most watched news channels in Europe: CNN International, BBC World News, Al Jazeera English, and Sky News International (Deirdre, Pellicanò, and Schneeberger 2013). As legacy news media channels like these are crucial actors for amplifying and sustaining attention to certain topics, they play a decisive role in shaping national discourse and exert pressure on political decision makers (Langer and Gruber 2021). Our selection represents the channels which have an English language YouTube presence from 2011 or before (Deirdre, Pellicanò, and Schneeberger 2013; Vissol 2005).[4] We excluded channels not relevant in terms of content (e.g. exclusively focusing on specific topics such as economics), and due to

Table 1. Popular news channels in Europe with a YouTube presence.

News Channel	YouTube Channel	Date of joining YouTube	Subscribers	Channel Views	Uploaded Videos
CNN International	CNN	2005, October 2	13.1M	10,703,638,446	153,335
BBC World News	BBC News	2006, April 8	11.2M	3,113,313,719	15,193
Al Jazeera	Al Jazeera English	2006, November 23	8.47M	2,720,208,791	95,266
RT	RT	2007, March 28	4.53M	3,538,658,705	59,685
Sky News International	Sky News	2006, June 12	3.96M	1,942,630,004	20,974

Note: Table created with data from the 'About' pages of the listed YouTube channels as of 2022, January 22.

access limitation we could not include RT. We selected the channels with the highest subscription according to YouTube statistics (see Table 1).

Data collection took place in February 2022 with an automated query via YouTube's Application Programming Interface (API) using Python programming language. We retrieved various metadata of the videos (title, description, transcripts, likes, comments, etc.) using the keywords 'refugee' and 'refugees' for each channel from 1 January 2011, to 31 December 2021. With this very broad term, we wanted to make sure we got thematically relevant videos; moreover, the YouTube search algorithm does not allow a Boolean combination of words or truncations.

The first data extraction resulted in 13,699 videos, after removing duplicates 13,539 videos remained. To analyze coverage that deals with or represents refugee women in some way, we further customized the dataset by using a programmed filter[5] to search for the keywords 'woman', 'women', 'girl(s)', or 'female', resulting in a sample of 2876 videos, spreading over the four channels. However, as the mere existence of keywords does not always correspond with that the video is really thematically relevant, we trained six student coders for further analysis. Coding was done in three stages with the unit of analysis being a single video identifiable via the YouTube video ID:

(1) In a first step, coders decided whether the respective video is relevant to our research project, i.e. that it deals with the topic of (forced) migration. This decision was done based on expressions or phrases within the video title, description, and transcript. At least one third of the video had to deal with the topic of (forced) migration in the widest sense to be regarded as relevant.[6]
(2) If relevant, the general content of the video was coded including information on the covered topics, ethnic groups, conflicts, etc. Lastly, the number of women in the video was registered in this step. We only counted women who were addressed as individuals, i.e. they were either talking/their voice was being heard or they were referred to as a single person (e.g. by name or otherwise uniquely identified). Accordingly, women that were either just shown (i.e. in a mass scene or in the background) or not talked about as individuals (i.e. reporter is talking about women in general) were not counted.[7]
(3) If applicable, in a final step, more detailed information about these women as well as further context information (e.g. actors) was recorded.

Figure 1 summarizes the various steps of data extraction and wrangling.
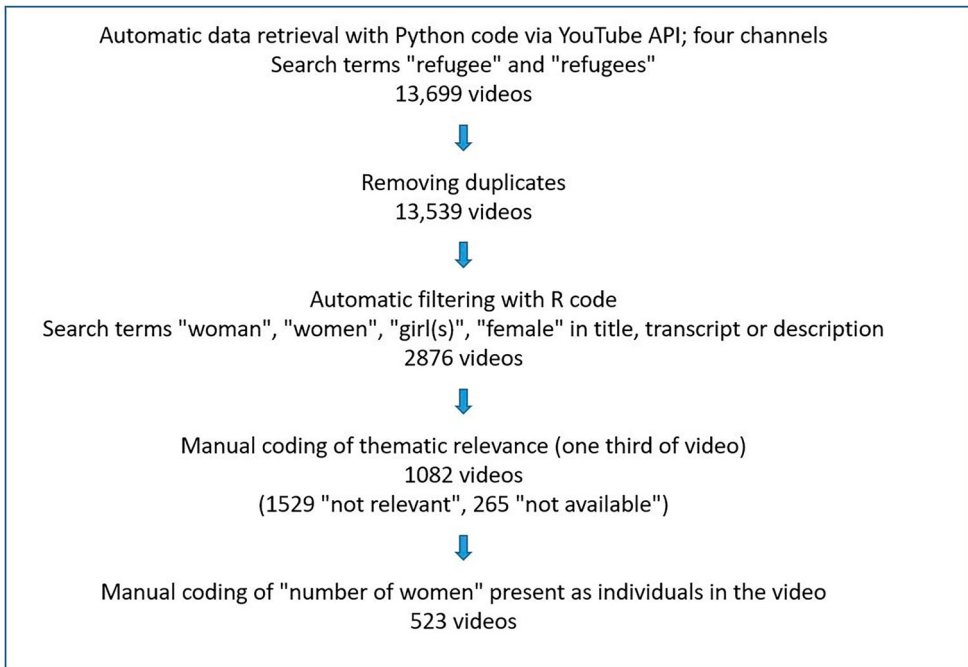
Figure 1. Steps of data extraction and wrangling, indicating the respective number of videos.

Manual coding

To analyze the data, i.e. determine number and content-related representation of female refugees, we applied a manual quantitative content analysis. We created a codebook that was repeatedly piloted until it effectively captured all relevant dimensions amongst the variables. It contained formal variables (e.g. release date, length, number of views of a video, news type etc.) as well as content variables that included context information e.g. on the flight situation, questions of responsibility, ethnic groups[8], actors and sources. Concerning topics, we grouped the videos into 29 categories plus a residual category. Topics were developed by scrutinizing existing literature plus watching a selection of videos and inductively developing codes from the material.[9] Further, we specified if the women appear as speakers (e.g. interviewed) and how prominent their appearance is relative to the whole video content (e.g. high share of speech and/or images). Based on the framing concept, esp. vulnerability and agency (see adjectives by Hunt (2008) mentioned above), we also coded the characteristics with which the women shown could best be described (e.g. vulnerable, caring, hopeful, ambitious, empowered etc.)[10] and the roles they were assigned (e.g. mothers, survivor, professional etc.) within the video. Finally, we were interested in the general tonality of the video, its stance and attitude towards the refugee women plus emotions conveyed by the video.[11]

Concerning intercoder reliability, after the coder training and subsequent checks we pretested the codebook using a subset of the 2876 videos dataset of n = 33 videos. Using Fleiss Kappa's formula (particularly suitable for multiple coders) for calculating the coefficient of reliability, we report moderate to substantial values (according to the evaluation by Landis and Koch [1977, 165]).[12]

Automated analysis

Computational social sciences have gained importance in migration research (Heidenreich et al. 2020; Drouhot et al. 2023). For the automated analysis we used a structural topic modeling approach to identify central topics within our dataset. We worked with the transcripts of the thematically relevant videos that were automatically retrieved via the YouTube API. Out of the 1082 relevant videos, transcripts were available for 1037. We used a package-provided default stop word list and then added further stop words after checking for word frequency.[13] The number of topics K was decided upon the statistical fit (coherence and exclusivity) as well as upon the context displayed by ten words that described the topic respectively and yielded plausible results for 30–35 topics (cf. Appendix A).

In addition to interpreting the number of comments as an indicator for audience interest, we wanted to identify the reactions of viewers by an automated sentiment analysis. Comments were available for 285 videos, resulting in 83,925 single comments. As the 'tuber' package in R only calculates the top-level comments (without replies to comments), our analysis is based on 7,845 comments.

Results

Properties of the data set

The fact that out of 13,539 videos tagged with 'refugee(s)' only 1082 dealt with the topic of female refugees strongly supports *H1: Videos about refugee women will make up a low proportion of all videos about refugees*. Of the 1082 videos Al Jazeera English (AJE) transmitted by far the most videos (cf. Table 2), which might be due to its location and main area of coverage in the MENA region where much of the flight movements originated. The UK stationed news channels BBC News and Sky News follow on ranks two and three, whereas CNN International as a US-based 24/7 news channel provides only 91 videos during the period of 11 years. For the first two years in our sample (2011 and 2012) we find videos only by AJE. It is not clear whether the other channels uploaded only selected videos at that point in time or whether they in fact did not report on the subject of refugee women.

Regarding the length of the videos, we report a median of 02:59 minutes (as could be expected in standard news reporting) with the longest video lasting 70:44 min; the 75 percent quartile being at 8:53 min. This means that longer features or documentaries about female refugees are scarce. This is proven also by categorizing the videos according to the news type: The sample consists of 585 newscasts and 242 features/documentaries, the remaining amount falling into categories such as interviews, talk shows or service

Table 2. Distribution of videos over channels.

Channel	Number of videos
Al Jazeera English	691
BBC News	178
Sky News	122
CNN International	91
Total number of videos	1082

pieces. On average, the view count of the videos was just over 100,000 views, the like count around 1000.

A Pearson correlation between view and like count reveals a positive coefficient of .802 (p = <.001). The most watched and respectively the most liked reports deal with highly emotional and cruel content such as slaughter, rape, and sex trafficking and have sensational headlines (e.g. 'The Syrian refugees turning to sex to survive' about Syrian refugees as prostitutes in Lebanon).

General overview: topics, ethnicities, conflicts

In this subsection our results will provide answers to RQ1 and RQ2.[14] With regard to topics, coders could code two main topics. Table 3 presents the five most prominent topics of the sample (all above 5%).

It becomes evident that reception of refugees in the host countries is a prominent issue. However, largely negative topics such as death(s)/fatalities, extant conditions in refugee camps (e.g. video ID_496 'Thousands seek refuge in Aleppo relief camps'), boat crossings and unrests make up almost one third of the coverage, if taken all together. Topics such as personal biographies, education, employment, or resettlement were marginalized.

2015 is regarded as a crucial point in time as there was an immense increase in asylum seekers in Europe due to the Syrian war and conflicts in Afghanistan and Iraq (Pew Research Center 2016; Spindler 2015). If divided into a 'pre-2015' and a '2015 and after' topic group, we see a shift of major topics with a decline of unrest/civil war/insurgent groups (15.4% of all 'pre-2015' videos and 5.5% of all 'post-2015' videos), and a rise of migration routes/border crossings/boat crossings (from 7.3% to 15.3%).

Whereas the topic modeling algorithm looked for word frequencies and thus focused on geographical areas and conflicts (Syria, Palestine, Myanmar, Iraq, Afghanistan, Libya, Mexico, Sudan etc.) with regard to the distribution of topics (cf. Appendix A), we rather looked for the meaning of the phrases and the context of flight rather than specific regions. Looking at the automated version, it also becomes evident that negative issues such as the camp conditions (topic 13), the crimes and misdoings by ISIL as well as the war against Iraq (topic 25), the boat crossings (topic 3) and family life (also in a positive sense, cf. topics 2 and 10) were covered most prominently. In a second step, it would now be mandatory to look into the video transcripts automatically assigned to certain topics in much more detail and to discuss which topics might be converged or split (Hase et al. 2021, 4). This, however, would exceed the space of this article.

We further were interested in the ethnicity of people evidently visible as refugees/displaced persons/migrants in the video and who can be clearly assigned to a country with

Table 3. Main topics of videos.

Main topic	%
Refugee reception and/or accommodation (incl. how governments deal with refugees; immigration law, policies)	11.5
Migration routes/border crossings/boat crossings (incl. border controls)	10.4
Camps	9.3
Unrest/civil war/insurgent groups	6.9
Death(s)/fatalities	5.9

Table 4. Main ethnic groups / home countries mentioned in the videos (multiple coding possible).

Country or ethnic group mentioned	n	%
Syria	268	24.8
Rohingya/Myanmar	128	11.8
Afghanistan	89	8.2
Iraq	52	4.8
Somalia	51	4.7
South Sudan	33	3.0
Total	621	57.3

refugee/migration movements. While coders could code up to five ethnicities/countries, in less than a fifth of all reports, more than one ethnicity was foregrounded (and if so, mostly neighboring countries). Table 4 displays the main most mentioned ethnicities/ home countries.

Out of the 1082 videos, almost one fourth focused on Syrians. The Rohingya crisis in 2017 led to an increased reporting in 2017 and 2018. Syria, too, got into focus especially in and after 2015, but has also high shares in 2012 and 2013. 95 videos centered on the refugee crisis as such, without mentioning specific ethnicities/countries (e.g. video ID_1588 'How can people displaced by climate change get justice?'). All in all, we coded over 80 different ethnicities or countries in focus; many, however, had ten or less mentions. There is a moderate but significant correlation of the main ethnicity mentioned in the video and year of video release ($p < .001$; Cramer's $V = 0.32$); the distribution reflects the main crisis years, e.g. 2011 for the Somalis (UNHCR 2011), or 2018 for Venezuela, when the number of Venezuelan refugees rose significantly (UNHCR 2019).

In a next step, we identified if a host or transit country was presented in the report and allowed multiple coding (up to three). Table 4 shows the countries that were mentioned in more than 30 videos, the percentages referring to an N of 1464 mentions of single countries in the 1082 videos. In 34 videos, no host or transit country was mentioned.

Table 5 corresponds to Table 4 (ethnicities) as the main flight routes become visible, e.g. from Syria to Lebanon or via Türkiye, Greece or Italy to Germany; or from Myanmar to Bangladesh; from Somalia to Libya.

Table 5. Host or transit country mentioned in the video (N = 1498 coder decisions).

Host or transit country	n	%
US	105	7.2
Bangladesh	101	6.9
UK	100	6.8
Türkiye	80	5.5
Greece	66	4.5
Lebanon	62	4.2
Syria	59	4.0
Europe/EU (if not specified otherwise)	57	3.9
Jordan	56	3.8
Italy	56	3.8
France	47	3.2
Libya	40	2.7
Germany	40	2.7
Iraq	37	2.5
Total	906	61.7

We asked which conflicts in the home countries of the refugees the journalists stated and whom they (or the people they interviewed) accused of being responsible for this conflict (RQ2). Here again, up to three coding decisions were possible out of a list of over 20 conflict issues and of over 20 people/groups/institutions in charge. Results indicate that in 299 out of the 1082 videos no home country conflict was explicitly mentioned and in 590 videos no accusation pronounced. In the remaining videos, we found 1428 mentions of conflicts, whereof more than a third quoted unrest, (civil) war or insurgent groups that caused severe troubles in the home country. This was followed by, among others, persecution out of political, ethnic and/or religious reasons, violent experiences such as rape, or socioeconomic crises. Of course, conflicts are often interdependent and caused one by another. Yet, a journalist can set a specific focus or frame, centering the report on a particular scope of the conflict.

It is not surprising that those accused most often of being responsible for the conflict are rebels and insurgent groups (n = 171), followed by head of states of dictatorial or authoritarian regimes or the regimes as such (n = 153). Then, however, head of states of democratic countries or democratic countries as such are also attributed guilt for the bad conditions (n = 108). To a lesser extent the 'international community' is accused. Military and terrorists are also held responsible (n = 93; n = 85). This shows that journalists as well as people in the reports attribute guilt to different kinds of people and institutions. In 18 cases, external factors like climate change and natural disasters were deemed responsible.

In contrast to the conflicts in the home countries, conflicts in host or transit countries were mentioned more often (in 924 out of the 1082 videos). This is not unexpected in light of the top three topics we already identified: reception and accommodation situation, flight routes, and camp situations. The main conflicts here consist in the camp conditions (main conflict in n = 139 videos) or conditions during boat crossing (n = 92), unrest/civil war/insurgent groups (n = 91), and discrimination (n = 75). It is evident that conflicts such as an unsure residence status, food insecurity and mobility restrictions are also closely connected to living in camps or gaining ground in the host country. This framing shows a focus on vulnerability and non-agency.

Who was held responsible for the conflicts in the host and transit countries? Above all, the heads of state of democratic countries or the countries as such (n = 347; 35% of N = 991 mentions in total). All other groups of people or institutions accused had a share of below 10% respectively, e.g. traffickers and smugglers, the head of states of dictatorial or authoritarian regimes, or the international community.

Representation of women as individuals – as speakers or in images

Our research asks how much 'space' reports devote to refugee women. We therefore coded the number of women that talked in the video (at least their voices being heard) and/or that were addressed as an individual (e.g. at least their name was mentioned in voice over and a picture shown). We further coded women that were shown in mass scenes, for instance in images of refugee streams, but not specifically talked about as individuals. In most videos either no woman appeared, women were shown in a mass scene or one woman was interviewed or presented as an individual. Videos

Table 6. Distribution of relevant videos, women count and reporter on site.

Channel	Number of videos relevant (topic of female refugees)	Number of videos with women presented as individuals ('given voice or image')	Number of videos where the reporter is on site
Al Jazeera English	691	348 / 50.4%	272 / 39.4%
BBC News	178	92 / 51.7%	59 / 33.1%
Sky News	122	50 / 40.7%	45 / 36.6%
CNN International	91	33 / 36.3%	21 / 23.1%
Total	1082	523 / 48.3%	397 / 36.7%

with two to five women were seldom and only AJE gave space to one video with eight and one with nine female actors.

The following results refer to those videos with individual representations of female refugees only. As we identified 315 videos with no woman appearance and 244 with women presented in mass scenes, 523 videos remained for further analysis (316 with 1 woman, 141 with two women, 45 with three and 21 with four to nine women). With regard to the channels, we already reported the number of relevant videos in Table 2. Here (Table 6), we add the number of videos and proportions where the refugee women are presented as individuals and further the number of videos where a reporter was on site, e.g. at a refugee camp. Coding instructions required the reporter to be seen in front of the camera at the place of action.

AJE and BBC seem to give comparatively most prominence to female individuals when reporting about them. However, in almost half of these reports refugee women are only spoken *about* and their voices remain unheard, their bodies unseen. The high share of videos with reporters on site suggests that the channels still have a strong net of correspondents, or at least deem it important to have reporters on site. This fact remains the same no matter which state of flight (home country, transit or host country) we look at.

Most videos covered a story situated in the host country (Table 7), which could be expected regarding the topic ranking (cf. Table 3). We counted 166 reports that dealt with situations on the flight, including settings in transit countries. Reports about women in their country of origin were below 10%.

In reports about refugee women, refugees (men and women alike) are treated as the main or second major actors. Besides them, there are other actors in the videos; coders were allowed to record up to five. In 175 videos, representatives of NGOs and humanitarian organizations such as the Red Cross played a major role, followed by national politicians or representatives of the nation as such (135 videos). Military personnel were mentioned in 98 videos and UNO representatives (e.g. UNHCR) in 66. All other categories such as perpetrators, experts (i.e. researchers, analysts, lawyers etc.), teachers or smugglers were mentioned in less than 50 videos.

Table 7. State of flight presented in the videos.

State of flight	n	%
Situation in hosting country	275	52.6
Situation on the move (including transit countries)	166	31.7
Situation in country of origin	51	9.8
Other/unclear	31	5.9
Total	523	100.0

News reports often mention (and should mention) the source the obtained information came from. Whereas in 329 reports (of N = 523), no official source was mentioned, 98 reports quote UN organizations, e.g. UN(O), UNHCR, UNRWA, UNICEF, UNFPA, UN World Food Programme (WFP). Ranking second, we find 38 videos mentioning human rights organizations and aid agencies as sources, such as Amnesty International, Oxfam, Save the Children, Doctors without Borders, Human Rights Watch, Women for Refugee Women. 35 videos rely on government sources or other authorities, for example police spokespersons. Other sources include researchers and experts (e.g. a historian) up to 'right wing groups say … ' and Tweets from former US President Trump.

Refugee women actors

In this part, we concentrate on the representation of the 840 single women (in the N = 523 videos) that were identified as individuals either as speakers raising their voice in the videos (n = 707) or shown in images (then mentioned e.g. via voice over; n = 90).[15] For each of these women we recorded roles, representations and prominence. The role was defined as the relevant characteristic of the woman in the video, emphasized either through image or text. For coding the representation, we provided a list of adjectives that related to a certain frame of how the media showed the woman. And finally, the prominence or estimation of prevalence questioned to what extent the reporter gave space or attributed importance to the woman.[16] In general, rather medium to low prominence was given to the women (no matter whether they talked or were just shown), in almost half of the cases. Yet, in more than a third of the cases, the woman was presented with a medium to rather high share of speech or image.

Regarding roles, coders were able to record up to five for each of the 796 individual women. Taken together, the following roles dominated in the reports (Table 8).

Results indicate that the representation as a vulnerable victim combined with the mentioning of the family status is most common. This supports *H2: Refugee women will be represented as vulnerable victims*. Following the concept of distant suffering (Huiberts and Joye 2019; Kyriakidou 2015), this combination also explains emotions of empathy

Table 8. Roles ascribed to the refugee women according to mentioning in text or image (multiple coding possible).[17]

Role	n	%
Victim	360	20.9%
Mother	316	18.4%
Daughter/Girl/Sister	260	15.1%
Survivor	166	9.6%
Wife/Married woman	130	7.6%
Muslim woman	87	5.1%
Activist	73	4.2%
African woman	39	2.3%
Orphan	30	1.7%
Pregnant woman	20	1.2%
Prostitute	18	1.0%
Arab woman	17	1.0%
Professional (e.g. sportswoman, model, medical expert, teacher, popstar, journalist, etc.)	16	0.9%
Student	13	0.8%
Widow	13	0.8%
Politician	7	0.4%

Table 9. Representation of women (multiple coding possible).

Representation	n	%
Vulnerable/disadvantaged/helpless/dependent/discriminated	540	29.5%
Suffering/traumatized/terrified/shocked	382	20.9%
Caring	194	10.6%
Empowered/independent/ambitious/successful	152	8.3%
Resilient	150	8.2%
(Sexually) exploited/abused	85	4.6%
Thankful/hopeful/positive mindset	81	4.4%
Other	75	4.1%
High-educated/high-skilled	74	4.0%
Angry/frustrated	48	2.6%
Low-educated/low-skilled	25	1.4%
Concerned/worrying	15	0.8%
Dead	7	0.4%

and sadness during reception of the video (see next section). Of course, refugees are always victims and sufferers of something, be it violence, political persecution, natural disasters, economic crisis. Hence, it is natural that the 'victim' role precedes. However, it would be interesting to see whether male refugees would be ascribed as often the family position as women which gives a framing of dependency and care. Another prominent finding is that ethnicity or religion were mentioned.

Consistent with our findings of 'role', the prominent characteristics of the shown women are those of a victim: helpless and vulnerable (Table 9). In line with the 'mother/female carer frame' we find the description of 'caring' on rank three. In addition, we detected a relevant number of positive attributes ascribed to the refugee women, such as ambitious (e.g. a Somalian woman becoming a city council member in America; ID_2518), resilient, hopeful (e.g. a video about girls from Afghanistan who love playing football; ID_3625) and high-educated (e.g. shown by mentioning their profession, for example 'this woman was a government accountant in Ethiopia'; ID_1512). Video content with women coded as 'empowered/independent/ambitious/successful' indicates that, at least to a certain extent, the agency of refugee women is represented (e.g. the story of hijab-wearing model Halima Aden who is a former Somalian refugee [ID_1303], or a refugee woman from Syria opening a shop for wedding dresses in a Syrian refugee camp [ID_2419]). In sum, the strong focus on non-agency with only few exceptions supports *H3: There are few reports attributing agency to refugee women.*

Reception and perception of video content

RQ3: Which emotions will be conveyed by the reports?

This, we admit, is a subjective topic and intercoder values indicate that the videos were not perceived completely similarly by the coders. However, a strong common tendency could be observed. The number of comments below a video served as an indicator of to what extent the video provoked reactions. Overall, in our sample only 28 videos did not yield any comments, 285 did, and for the remaining videos comments were disabled or not apt for data mining. Content-wise, we could not identify any scheme underlying this division. Our assumption that perhaps comments were disabled for strongly sensitive topics did not hold up. The number of comments was 100 or below at almost 60% of the videos and almost 20% showed between 101 and 500 comments. There were only

Table 10. Videos with highest number of comments.

Video title	No. of comments	Channel
Yazidi survivor: 'I was raped every day for six months'	24,707	BBC
'We're going to slaughter you': The children of Syria's IS camp	22,159	Sky News
Islamic State 'are all monsters' says 14 year old Yazidi boy	6810	BBC
Shamima Begum: IS teenager to lose UK citizenship	6645	BBC
Afghanistan conflict: British passport holders trying to get home	6453	BBC
The North Korean women who had to escape twice	5779	BBC
The Syrian refugees turning to sex to survive	4286	BBC
Brides and Brothels: The Rohingya Trade	3712	AJE

six videos having triggered more than 5,000 comments; the titles of the eight most com-
mented videos are listed below (Table 10).

All the videos other than the second and eighth videos are from the BBC and reflect
the fact mentioned above that 'sex and crime sells'. Coders were asked to assess the pre-
vailing tonality of the video, i.e. the atmosphere that was predominantly perceived with
regard to the overall content of the video (Table 11). More than two thirds of the videos
seem to convey a rather empathic and affirmative tonality. 18% chose a neutral style and
only few were opposing or disagreeing or even hostile in their overall tonality. This,
however, does not indicate a negative attitude towards the refugees. It could just be a dis-
agreement to a certain law, for example. Regarding the specific attitude towards refugee
women, the overall impressions perceived by the coders were rather positive and
empathic. This shows that the channels' reports often take up a solidary stance on the
women refugees and their concerns. We can interpret the results of the conveyed
emotions (Table 12) in the same vein. Here, coders indicated the general emotion that
the channel is trying to convey with the report, i.e. to determine which emotions are
prevalent.

RQ3 can thus be answered as follows:

We find a first big group of videos under the umbrella of 'empathy', a second evoking
negative emotions and pessimism, a third group of videos spreading positive and opti-
mistic emotions and a fourth of emotions of disrespect that seems to be relatively
small. Cross-tabulating emotions with release year, we find a weak correlation ($p =
.007$; Cramer's V = 0.17) and see a slight increase of anger as well as a decrease of
sadness and sympathy/empathy/compassion. A correlation between emotion and ethni-
city yielded no significant results. We did not ask coders to decide for a certain emotion
in single comments as these often were too short for a thorough interpretation. However,
an algorithm matched a sentiment score which is calculated by a positive or negative
weight attributed to single words (e.g. 'hate' or 'shit' score negatively, whereas 'happy'

Table 11. Overall tonality and attitude towards refugee women (N=523 videos).

	overall tonality	specific attitude towards refugee women
	% / n	**% / n**
Empathic	54.9 / 287	66.7 / 349
Neutral	18.0 / 94	20.1 /105
Affirmative	14.1 / 74	9.6 / 50
Ambivalent (including positive as well as negative tonality)	10.1 / 53	3.4 / 18
Opposing/Disagreeing	2.5 / 13	0.2 / 1
Hostile	0.4 / 2	0 / 0

Table 12. Emotions (N=523 videos, multiple coding possible).

Emotions	n	%
Sympathy/Empathy/Compassion	407	30.5
Sadness	256	19.2
Frustration	162	12.1
Anger	126	9.4
Hope	96	7.2
Fear	92	6.9
Surprise	56	4.2
Other	39	2.9
Disgust	39	2.9
Joy	32	2.4
Contempt	16	1.2
Trust	15	1.1

or 'wonderful' score positively) using the SentiWordNet package (Baccianella et al. 2010).[18] Examples from the comments are 'Well done Hungary!' (comment to video ID_1726; positive sentiment) and 'Very sad! They don't deserve this' (comment to video ID_3520; negative sentiment). In general, we report a sentiment score of 10.2 for the videos and a sentiment score of 6.9 for the comments, i.e. both on the positive side. Following the concept of digital emotion contagion (Goldenberg and Gross 2020), we hypothesized (*H4*) that there could be a correlation between video and comment sentiments. This was confirmed (see Figure 2). Looking at the development over time, we even observe an increase in "positivity" of the videos.
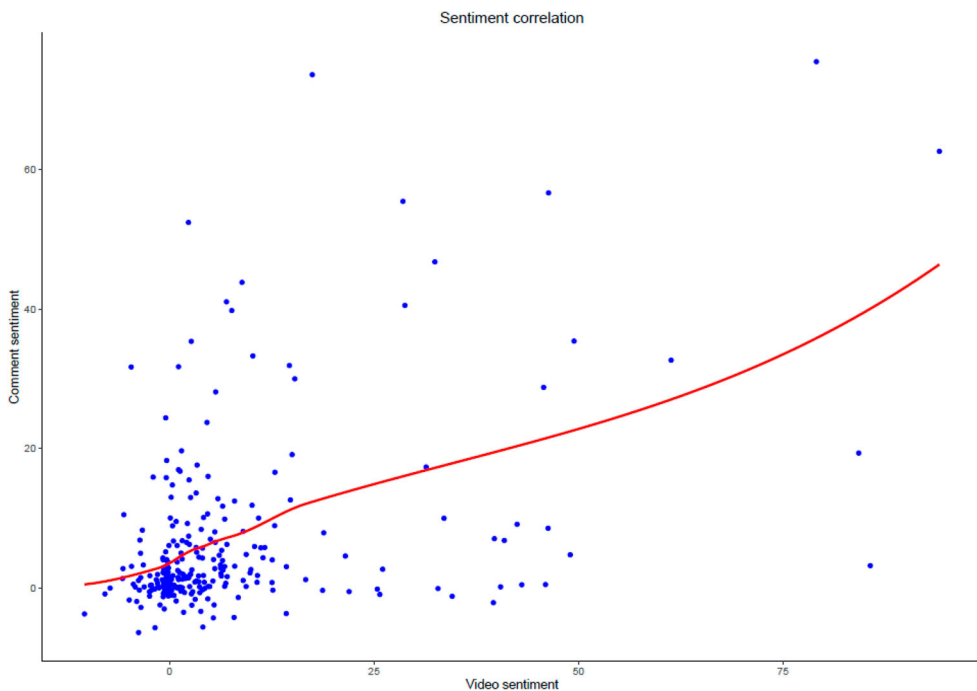
Figure 2. Correlation of sentiment scores in videos and comments.

Discussion

If migrant and refugee women do not appear as actors in the media, their lived realities, needs and issues do not rank high on the public agenda neither. This is why we called for the study of their media representations plus following the claim for a 'need for more comparative and longitudinal studies' (Seo and Kavakli 2022, 159). The depersonalized, mediated version of female refugees permeates societal views in the absence of other sources of information. This makes refugee women's studies from a media perspective even more crucial.

Our study unfolded two strands: On the one hand, it confirms previous findings of refugee women representations as vulnerable and passive. The constant focus on victim status and helplessness, after all, blots out agency and can be regarded as paternalistic or a prerequisite of paternalism (Barnett 2011). The representation as a victim was often combined with the mentioning of the family status and allusions to ethnicity or religion: female refugees were explicitly presented as 'Muslim' (religion) or 'Arab' (ethnic category) which is congruent with findings of other studies (Lünenborg and Bach 2009). Future research should go deeper into a comparison in how far this differs from media representations of men.

On the other hand, our study showed that we cannot speak of continuously stereotyped representations because we, in line with Hunt (2008), also found positive and empowering reports where women were attributed roles of success and self-agency as we have shown with some examples in the results section. In general, the reports showed a wide diversity of settings refugee women are part of. Many of the reports applied a human interest frame that conveyed 'distant suffering' emotions (Del Zotto 2002; Kyriakidou 2015).

Regarding the agenda setting (Rogers and Dearing 2007), we noticed that all channels adhere to conflict-laden news values such as acute crisis and negativity. Refugee movements that stem from not so violent home country situations were treated less often (e.g. Venezuelans in comparison to Rohingyas or Syrians), even though in pure numbers, in 2018, 'asylum claims from Venezuelans dominated the global asylum statistics' (UNHCR 2019). Further, movements that spread over a longer period are neglected as well (e.g. movements resulting from the Somali civil war or the Israeli-Palestinian conflict). Prominent themes surrounding the topic of refugee women are narratives of victimization, paternalistic framing, or postulations of oppression and vulnerability.

We had expected more results from the longitudinal comparison. However, we did not find significant changes in reporting after the migrant crisis of 2015. A cluster analysis did not bring up applicable results either. We see a reason for this in the international sample of world-wide broadcasters. The rather 'European' crisis was not that dominant as the channels also covered e.g. Mexican border crossings, historical Jewish migration movements, Asian crises etc. which made the coverage quite heterogeneous.

Regarding effects of coverage, we have proved that digital emotion contagion (Goldenberg and Gross 2020) is not only a phenomenon of Facebook or Twitter (Ferrara and Yang 2015; Kramer, Guillory, and Hancock 2014) but seems to apply to YouTube commenters as well – at least in this context of refugee women coverage.

Limitations and outlook

Despite its strength in showing similarities in the salience and framing of refugee women in international news channels, our study faced various limitations. First of all, even though we assumed that the YouTube videos resemble linear television offers, we did not find 'YouTube policies' on the channels' websites and therefore cannot be totally sure that this is the case. Further, YouTube videos commenters surely do not resemble linear TV recipients and an influence on the opinion of the public and of politicians might be stronger by national news. Public perception and discourse can also be formed by interpersonal communication or two-step-flows of communication via opinion leaders. In this regard, our content analysis remains limited and we propose an analysis of national news and interpersonal communication on the topic of terrorist attacks. Focus groups with various stakeholders could contribute to understanding the flows of information and encourage participants to critically reflect their information behaviour during crisis situations.

As we have looked at only specific channels, new research should turn towards an even broader sample or include national broadcasters. In addition, suggesting a concrete scenario for follow-up research, it would be wise to pursue a more qualitative in-depth approach in order to delve deeper into the interplay of topic, pictures, sound, and text. In general, even though some of our categories were visual-oriented, we suggest a more detailed look at imagery, e.g. applying visual framing analysis (Hellmueller and Zhang 2019) and evaluating media's responsibility of portraying refugees (Chouliaraki and Stolic 2017), especially with regard to gendered misrecognitions of visual representations of refugees (Ryan and Tonkiss 2023). As other social media such as Instagram or TikTok have their focus on visuals as well, analyses could be expanded to these communication channels.

Method-wise, we combined and compared results from manual as well as automated content analysis. We conclude that up to date algorithms cannot (always) substitute human coders (de Graaf and van der Vossen 2013). In general, we recommend a combination of close reading (manual) and distant reading (automated) of texts that can lead to a reliable interpretation (Hase, Engelke, and Kieslich 2020, 1389). The comparison of topics demonstrated that both the contextual approach as well as the data-frame-matrix approach might have missed specific sub-topics. Further, the algorithm does not relate nouns or names that adhere to the same individual, e.g. when a person is introduced as 'female refugee', then called by her name and afterwards identified as 'mother'. Here, only a human coder sees the relation.

A topic-specific dictionary and supervised model would be paramount in order to conduct a meaningful topic modeling in the field of refugee studies (DiMaggio 2015). We strongly recommend working with a validated automated approach in future research as this is a manageable way to deal with big text corpora and e.g. include much more transcripts which would allow for a comparative analysis of even more channels and a wider time span.

Finally, our study contains implications for media companies. We suggest more reports about where the refugees come from and their diversified backgrounds over time. This might enrich discursive power in the context of refugee women in the media.

Notes

1. The 'refugee crisis', in public discourse, refers to a period of refugee influx into Europe accompanied by a massive political and social impact (Elle and Hess 2018).
2. This approach helps categorize a text based on predefined keywords representing the concept to be measured (Lind and Meltzer 2021).
3. Although Lind and Meltzer (2021, 930) do not explicitly mention refugee women, they are at least partially included in the figures for migrant women as their dictionary includes phrases like ‚asylum seeker' and their research design covers the period of the so called 'refugee crisis' (cf. Footnote 1).
4. According to a report on Pan-European news channels, BBC World, Bloomberg, CNBC Europe, CNN International, Euronews, Sky News, and TV5 (now TV5Monde) are the most widely viewed news channels in Europe (Vissol 2005). These observations overlap with the 2013 report by the Council of Europe based on data from the European Audiovisual Observatory. English language channels in the list include CNN International, BBC World News, RT (Russia Today), Al Jazeera, Euronews, France 24, Deutsche Welle, and Sky News International (Deirdre, Pellicanò, and Schneeberger 2013). Compiling the two lists, we excluded Bloomberg and CNBC Europe for their exclusive focus on business and economics, TV5Monde was removed as it does not have an English Channel. We then looked up the subscription numbers of the respective YouTube channels and concluded on the above stated sample of most watched YouTube channels. E.g. Euronews and France 24 did not yet pass the 3 million subscribers mark.
5. We performed the programmed filter analysis using the software R.
6. Cases that were excluded consisted of, for example, a Trump speech of one hour in which he talked two minutes about refugees in general, then talking about women at a completely different part of his speech (with no reference to women refugees at all). Like this, the automated tagging of refugee(s) and women was consistent but did not make any sense with regard to the topic of our study.
7. We acknowledge that, e.g. in film studies, there exist measurements such as the Bechdel test (Selisker 2015) with regard to representation and stereotyping of women in narrative fiction. However, these center on dialogues between women which was not the focus of this study that even looked for visibility of single women.
8. We are aware that in this category we are mixing concepts such as nationality, country of origin, ethnic origin/groups, ethnicity, etc. (among others, Barth 1998); however, this is in part approved by researchers (Penn and Lambert 2002). Nationality or country (of origin) alone, however, did not seem to us to be purposeful, since, for example, the Rohingya cannot be covered by it. Unfortunately, a differentiated and detailed classification was not possible, since we could only work with the information from the videos.
9. The list of topics is available in the codebook, variable 'C_V3'.
10. The codebook provided 12 categories of adjectives which we selected on the basis of attribute word lists regarding stereotypes and discursive categories from other studies (e.g. Haider, Olimy, and Al-Abbas 2021; Hunt 2008; Kroon, Trilling, and Raats 2021) which we have successively supplemented and adjusted in the course of the preparation phase.
11. We provided eleven emotions to choose from in the codebook for which we used established scales and studies (including those related to the topic of migration) to guide our selection (Miceli and Castelfranchi 2018; Mohammad and Turney 2013; Savoleinen 2015) as well as definitions of the APA Dictionary of Psychology.
12. The report a Kappa of .78 for the decision of relevance, .65 for the news type, main ethnicity .76, state of flight .64, women count .63, main actor .78, tonality .61, attitude towards refugee women .85, general emotion .80.
13. A domain-specific stop word dictionary would have been much more useful. E.g. to exclude, for example, the term 'refugee'. We come back to this in the discussion.
14. RQ1: Which topics/conflicts, ethnic groups/countries will be featured most prominently in the reports? RQ2: Who is held responsible for the conflicts in the home/transit/host country?

15. As we coded a maximum of three individual women per video, this does not add up to 840 but 796.
16. We classified according to four gradations from 1 = High (indicators: high share of speech, high share of images etc.) to 4 = Low (indicators: no share of speech, low or no share of images etc.).
17. The remaining 9.1% were coded in a residual category. Here, e.g. other roles of family constellation (grandmother, divorced) were mentioned.
18. In their article on digital emotion contagion, Goldenberg and Gross (2020) mention various sentiment analysis tools such as SentiStrength, LIWC or VADER which count emotional words based on predetermined dictionaries and that achieved a quite good correlation with human raters in classifying texts as positive, negative or neutral.

Data availability statement

The whole dataset is available upon request.

Data deposition

As the transcripts as well as the video comments contain personal or company data we refrain from uploading the datas in an open data repository.

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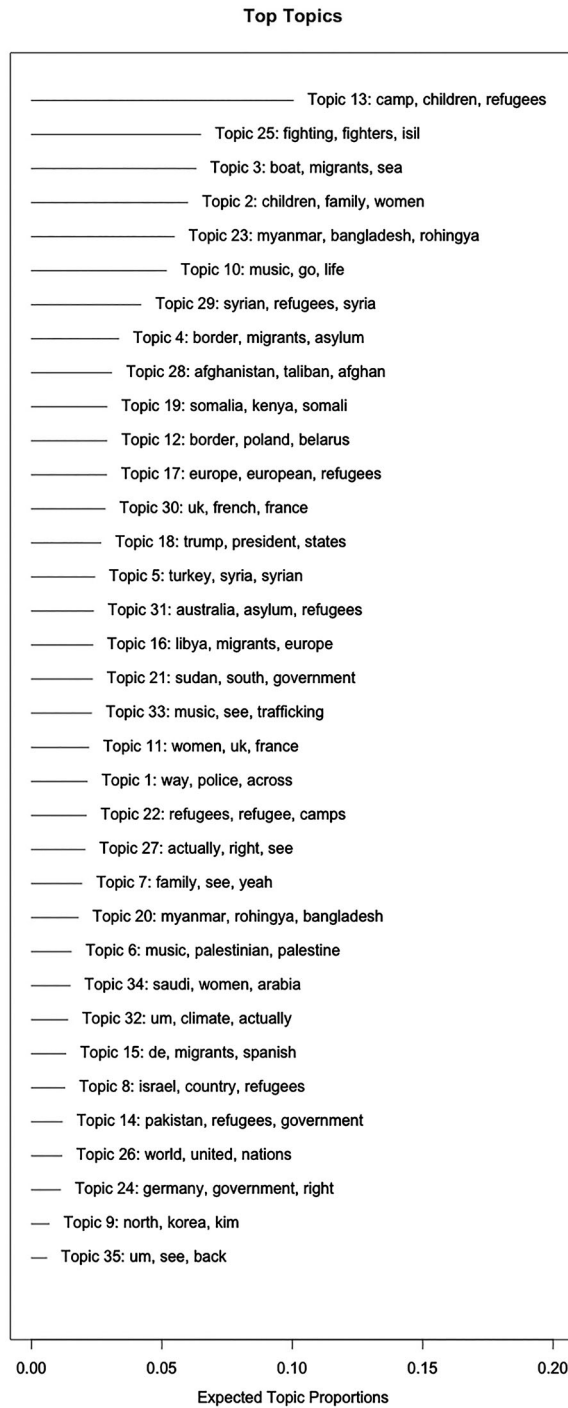
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Appendix A

Top Topics

Topic 13: camp, children, refugees
Topic 25: fighting, fighters, isil
Topic 3: boat, migrants, sea
Topic 2: children, family, women
Topic 23: myanmar, bangladesh, rohingya
Topic 10: music, go, life
Topic 29: syrian, refugees, syria
Topic 4: border, migrants, asylum
Topic 28: afghanistan, taliban, afghan
Topic 19: somalia, kenya, somali
Topic 12: border, poland, belarus
Topic 17: europe, european, refugees
Topic 30: uk, french, france
Topic 18: trump, president, states
Topic 5: turkey, syria, syrian
Topic 31: australia, asylum, refugees
Topic 16: libya, migrants, europe
Topic 21: sudan, south, government
Topic 33: music, see, trafficking
Topic 11: women, uk, france
Topic 1: way, police, across
Topic 22: refugees, refugee, camps
Topic 27: actually, right, see
Topic 7: family, see, yeah
Topic 20: myanmar, rohingya, bangladesh
Topic 6: music, palestinian, palestine
Topic 34: saudi, women, arabia
Topic 32: um, climate, actually
Topic 15: de, migrants, spanish
Topic 8: israel, country, refugees
Topic 14: pakistan, refugees, government
Topic 26: world, united, nations
Topic 24: germany, government, right
Topic 9: north, korea, kim
Topic 35: um, see, back

0.00   0.05   0.10   0.15   0.20
Expected Topic Proportions

Figure A1. Distribution of topics (automated analysis).

Table A1. Automated topic modeling (K = 35).

Topic 1:
  way, police, across, town, left, trying, apart, either, leave, hundreds
Topic 2:
  children, family, women, girls, years, music, year, mother, go, told
Topic 3:
  boat, migrants, sea, rescue, island, coast, children, boats, water, europe
Topic 4:
  border, migrants, asylum, mexico, children, states, united, country, canada,
  back
Topic 5:
  turkey, syria, syrian, turkish, refugees, border, regime, war, back, zone
Topic 6:
  music, palestinian, palestine, palestinians, state, jewish, new, british,
  foreign, israel
Topic 7:
  family, see, yeah, go, back, good, new, life, time, two
Topic 8:
  israel, country, refugees, countries, denmark, go, government, right, eritrea,
  back
Topic 9:
  north, korea, kim, korean, chinese, kind, china, government, actually, time
Topic 10:
  music, go, life, see, yeah, back, family, time, feel, first
Topic 11:
  women, uk, france, british, home, syria, right, said, french, country
Topic 12:
  border, poland, belarus, migrants, polish, police, back, eu, european, see
Topic 13:
  camp, children, refugees, refugee, home, food, women, living, thousands, camps
Topic 14:
  pakistan, refugees, government, back, go, country, afghanistan, time, years,
  afghan
Topic 15:
  de, migrants, spanish, morocco, italy, la, spain, italian, europe, new
Topic 16:
  libya, migrants, europe, detention, libyan, africa, italy, tripoli, go, centers
Topic 17:
  europe, european, refugees, countries, eu, asylum, migrants, crisis, greece,
  refugee
Topic 18:
  trump, president, states, country, united, – , said, countries, administration,
  immigration
Topic 19:
  somalia, kenya, somali, food, somalis, situation, aid, country, humanitarian,
  government
Topic 20:
  myanmar, rohingya, bangladesh, government, international, military, rights,
  community, human, country
Topic 21:
  sudan, south, government, ethiopia, conflict, sudanese, war, uganda, region,
  two
Topic 22:
  refugees, refugee, camps, um, camp, go, need, international, actually, health
Topic 23:
  myanmar, bangladesh, rohingya, refugees, military, government, border,
  violence, state, muslim
Topic 24:
  germany, government, right, german, country, refugees, sweden, lot, see, almost
Topic 25:
  fighting, fighters, isil, forces, killed, army, iraq, thousands, civilians,
  state
Topic 26:
  world, united, nations, war, country, peace, regime, iran, conflict, states

Topic 27:
  actually, right, see, refugees, lot, stream, yeah, go, world, said
Topic 28:
  afghanistan, taliban, afghan, kabul, country, airport, afghans, um, government, leave
Topic 29
  syrian, refugees, syria, lebanon, syrians, jordan, children, refugee, countries, lebanese
Topic 30:
  uk, french, france, migrants, calais, today, boats, smugglers, course, home
Topic 31:
  australia, asylum, refugees, government, country, seekers, detention, island, new, years
Topic 32:
  um, climate, actually, countries, political, right, need, change, see, mean
Topic 33:
  music, see, trafficking, go, work, women, two, money, slavery, said
Topic 34:
  saudi, women, arabia, media, government, rights, case, country, story, back
Topic 35:
  um, see, back, morning, year, good, lot, news, new, time