What Leads to Audience Issue Fatigue?
A Linkage Analysis Study on the Effects of News Coverage on Fatigue from Ongoing News Issues

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The news media cover certain political issues extensively for weeks, months, or years, leading the audience to become fatigued. Audience fatigue from and avoidance of ongoing political news issues are detrimental to an informed citizenry and problematic against the backdrop of citizens increasingly avoiding political news. This study examines how news coverage of an ongoing political issue affects news users' issue fatigue. Data from a three-wave panel survey on the Brexit issue are used and linked to an extensive content analysis of print, online, and television news coverage on the issue. The results of the panel analysis show that repeated information, complexity, and strategy framing lead to issue fatigue, while the intensity of exposure to news coverage and other political news characteristics, such as negative tonality and sensationalism, have no effect. The findings inform journalism and political communication researchers about the effects of communication about ongoing political issues.

Keywords: issue fatigue, news issues, news exposure, media effects, linkage analysis

Today's high-choice media environment provides people with an abundance of news via various outlets and online platforms, such as online news sites, TV news, social media, and messengers. When the news media cover a political issue extensively over a prolonged period, news users are likely to encounter the issue repeatedly through various sources. Recently, journalists and scholars addressed the idea that people become fatigued from public issues the news media cover extensively for weeks, months, or years. For instance, researchers and journalists discussed Coronavirus news fatigue (Bedingfield, 2020), Brexit fatigue (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019), and climate change fatigue (Morrison, Parton, & Hine, 2018). Previous research has introduced the terms topic fatigue and issue fatigue (Arlt, Schumann & Wolling, 2020; Gurr, Schumann, & Metag, 2022; Schumann, 2018) to describe these phenomena.

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Since audience issue fatigue is rooted in exposure to news on the issue during a prolonged period, news coverage will likely have an impact on the extent to which the audience becomes fatigued. News coverage on the issue is thus a key source of issue fatigue and the focus of this study.

Extant research points to overexposure effects from persuasive messages, for instance, health messages (So, Kim, & Cohen, 2017) and ads (Corkindale & Newall, 1978). When overly frequently exposed to these stimuli, people experience fatigue and wearout. Similarly, the intensity at which the audience is exposed to an ongoing issue in the news—albeit usually a nonpersuasive stimulus—will likely influence the emergence of audience fatigue from the issue. *How* the media cover the issue can also affect how the audience becomes fatigued. Previous political communication research has shown that characteristics of news coverage, such as frames (Valkenburg, Semetko, & de Vreese, 1999) and negativity (Lengauer, Esser, & Berganza, 2012), influence political attitudes and behavior. This suggests that characteristics of news coverage of ongoing issues influence fatigue perceptions among the audience, in addition to the coverage's sheer intensity.

However, we lack knowledge on how news coverage contributes to the emergence of audience issue fatigue. In this study, we address this gap and focus on the role of news coverage for issue fatigue for two aspects. We investigate how the intensity of media coverage on the issue and the characteristics of the news coverage lead to issue fatigue. By linking a three-wave panel survey and a media content analysis of media coverage on the Brexit issue in 2019, we analyze the causal effects of news coverage on audience fatigue from this issue.

For journalists whose job is, inter alia, to inform the public about the latest developments on (ongoing) issues and enable opinion formation (Hanitzsch, van Dalen, & Steindl, 2018), it is important to maintain their audience's attention to such issues. Therefore, it is also essential to know which characteristics of their reporting cause fatigue and develop strategies to avoid audience issue fatigue and avoidance. This is especially relevant against perceptions of biased reporting, news avoidance, and a decrease in citizens' trust in news media in several countries (Ardèvol-Abreu & Gil de Zúñiga, 2017; Newman et al., 2019; Skovsgaard & Andersen, 2020).

Issue Fatigue

Agenda-setting theory postulates that media attention to issues generally guides public attention to these issues (Brosius & Kepplinger, 1990; McCombs & Shaw, 1972). Vice versa, public attention to and interest in issues impact media attention to these issues. According to Downs' (1972) issue-attention cycle, the phases "pre-problem stage" and "alarmed discovery and euphoric enthusiasm" and "realizing the cost of significant progress" are followed by a "gradual decline of intense public interest" and, finally, "the post-problem-stage" (pp. 39–40). In the fourth phase, the "gradual decline of intense public interest" (Downs, 1972, p. 40), some people feel bored by the issue and pay less attention. Saturation and boredom effects in the audience make the issue disappear from the media agenda (Downs, 1972; Neuman, 1990). However, some issues' media coverage remains extensive for a prolonged period, and parts of the audience become fatigued from it (Gurr & Metag, 2021).

Theoretical models of repetition effects suggest that stimuli become more accessible and familiar to the individual through repetition (Zajonc, 1968). Repeated exposure leads to a perception of the stimulus as novel, interesting, and stimulating, to a reduction of uncertainty, and positively experienced learning (Berlyne, 1970; Cacioppo & Petty, 1979; Stang, 1975). When audience members

perceive an issue as relevant and are uncertain about it, their need for orientation is high and they expose themselves to information about the issue (McCombs & Weaver, 1973; Weaver, 1980). When it comes to risks, information insufficiency describes a person's need for information to deal with the risk (Griffin, Neuwirth, Dunwoody, & Giese, 2004). These strands of research suggest that the audience responds positively to repeated exposure to the issue during a period.

However, the literature on repetition effects and overexposure from persuasive messages suggests that a person's attitude toward the stimulus becomes more negative because of overly frequent exposure. Thus, when the audience is too frequently exposed to news about the same ongoing issue, issue fatigue emerges.

With regards to news, two aspects need to be clarified. First, an issue in the news is an informative rather than a persuasive stimulus, which does not suggest a particular behavior, such as purchasing a product. Second, overexposure effects from the issue occur because of exposure to different messages about the issue, as opposed to the same ad or health message in various sources over a prolonged period. Messages about ongoing issues differ from each other in various aspects, such as in the events and actors covered. The common core of these messages, however, is the issue (Geiss, 2015).

Three dimensions of issue fatigue are derived from previous research, the first two from theory and findings on repetition and overexposure effects (Berlyne, 1970; Cacioppo & Petty, 1979; So et al., 2017). Because of overly frequent exposure, audience members no longer perceive the issue as novel and stimulating; they perceive information about the issue as less newsworthy, repetitive, and irrelevant to reducing uncertainty. They experience tedium and saturation. Thus, audience members' motivation to engage in the issue or process information about it extensively decreases. Decreased information processing involvement (Matthes, 2008) is the first dimension of issue fatigue (Gurr & Metag, 2021, p. 22).

Annoyance and anger emerge in situations in which situational factors hinder a person's goal (Roseman, 1984), such as being too frequently exposed to a similar message against their will (Kim & So, 2018; Song, Jung, & Kim, 2017). Previous investigations revealed that recipients perceive anger and annoyance concerning ongoing news issues (Kuhlmann, Schumann, & Wolling, 2014; Newman et al., 2019). Therefore, the two negative emotions represent the second dimension of issue fatigue.

The third dimension of issue fatigue derives from another overexposure effect: News overload is the result of cumulative exposure to news and refers to the perception of being overwhelmed by news (York, 2013); however, it concerns news in general rather than the same stimulus or message and is thus a broader concept. Similar to the findings by Lee, Holton, and Chen (2019), we assume that repeated exposure to news *on the same* issue can turn into receiving too much information about that issue at some point; news users feel overloaded or overwhelmed by it.

Hence, issue fatigue is characterized by (1) decreasing issue-specific information processing involvement, (2) increasing annoyance and anger associated with the issue, and (3) perceived information overload about the issue. It refers to "an individual's negative mental state which emerges as a result of perceived overexposure to an issue that is intensively covered by the news media" (Gurr, Schumann, & Metag, 2022, p. 7). A mental state describes individuals' situational needs, motivational states, current thoughts, and consciousness (Cattel, 1963; Fridhandler, 1986). It is important to note

that issue fatigue in its narrow sense assumes that audience members are fatigued from the issue rather than from both the issue and its news coverage; some news users evaluate the news coverage positively while being fatigued from the issue (Gurr & Metag, 2022).

Previous research has shown that issue fatigue led to avoiding the issue during news media use (Gurr & Metag, 2021). When media users avoid exposure to information on the issue, learning about current developments and different positions concerning the issue can be impeded. Most scholars agree that well-informed citizens are better able to form their opinions, make informed choices, and participate in politics (Aalberg & Curran, 2012). Citizens' issue fatigue would thus be detrimental to democracy. It is therefore relevant to investigate how its emergence can be explained.

Effects of Exposure Intensity

Advertising wearout is caused by repeated exposure to the same television ad (Calder & Sternthal, 1980) and contingent on three intensity-related factors: the number of repetitions, the repetition interval, and the overall duration of the exposure (Corkindale & Newall, 1978). Fatigue from health messages emerges because of prolonged and repeated exposure to the same message by the media (So et al., 2017). Research on compassion and human-interest fatigue similarly argues that excessive exposure to media coverage is the cause of fatigue perceptions about nonpersuasive stimuli, such as social problems and human-interest stories in the news (Beyer & Figenschou, 2014; Kinnick, Krugman, & Cameron, 1996; So et al., 2017). News overload is also caused by the intensity (frequency) of exposure to news (Lee et al., 2019; York, 2013). We thus assume that intensity of exposure is equally important for the emergence of issue fatigue, and we propose our first hypothesis:

H1:   Higher levels of intensity of exposure to a news issue will lead to higher levels of issue fatigue.

Additionally, the characteristics of the information will likely have an impact on issue fatigue. However, research is lacking on which features of news coverage lead to issue fatigue. Since issue fatigue is an overexposure effect that concerns a political issue in the news, we consider two strands of research to derive the features of news reports that contribute to audience issue fatigue. First, we rely on research on how information characteristics cause overexposure phenomena. Second, we consult studies on how political news coverage characteristics influence political attitudes.

Transferring Effects of Media Content on Overexposure to Issue Fatigue

Overexposure effects are rooted in the exposure to information and contingent on the characteristics of the information. According to Berlyne (1970) and Stang (1975), novelty and thus the stimulating potential of the stimulus determine how pleasing it is perceived along with repeated exposure (Corkindale & Newall, 1978). We assume that the degree of novelty in the media reports on the issue is influential for developing fatigue. The motivation to process information on the issue (Matthes, 2013), the first dimension of issue fatigue, will likely decrease if the information is repetitive rather than novel, and anger can occur in response to unwanted repetitive content (Sweeny, Melnyk, Miller, & Shepperd, 2010). Therefore, we assume:

H2:   Higher levels of repetition in the media coverage of an issue will lead to higher levels of issue fatigue.

Information overload occurs, not only because of too much information received but also because of the characteristics of that information, which determine the energy needed to process information (Jackson & Farzaneh, 2012; Schneider, 1987). Thus, issue fatigue's third dimension, issue-specific information overload, will likely be influenced by the news coverage characteristics. Research suggests that the complexity of information elicits feelings of overload, since it requires more knowledge (Lee et al., 2019; Schneider, 1987). Although complexity might also make stimuli more interesting (Berlyne, 1970), it might cause feelings of being overwhelmed by information and a decreased motivation to process information on the issue when the issue is portrayed in a complex way for a prolonged period. Therefore, we propose:

H3:　　Higher levels of complexity in the media coverage of an issue will lead to higher levels of issue fatigue.

Kuhlmann, Schumann, and Wolling (2014) found that individuals who no longer wanted to see and hear about extensively covered issues perceived news coverage on the issues as, first, sensationalist, and second, as focused on prominent politicians. Gurr and Metag's (2022) study on the effects of repeated exposure to the same news issue revealed that news users perceive negatively sensational and personalized news coverage on the ongoing issue. Sensationalism refers to attention-attracting and emotion-arousing features of media content (Vettehen, Nuijten, & Peeters, 2008). A personalized news item focuses on politicians rather than on substantive political content (Rahat & Sheafer, 2007; Van Aelst, Sheafer, & Stanyer, 2012).

We assume that prolonged sensational and personalized news coverage of an ongoing issue leads to fatigue from this issue.

H4a:　　Higher levels of sensationalism in an issue's media coverage will lead to higher levels of issue fatigue.

H4b:　　Higher levels of personalization in an issue's media coverage will lead to higher levels of issue fatigue.

Kinnick and colleagues (1996) introduced the concept of compassion fatigue, which states that audiences become burned out by social problems covered pervasively by the media. Based on their findings, Kinnick and colleagues (1996) concluded that in addition to redundant and negative coverage, presenting problems without offering solutions causes fatigue. More generally, focusing on conflict and a lack of solutions can negatively affect users' attitudes and thoughts (Lengauer et al., 2012; McIntyre, 2019; Valkenburg et al., 1999). We assume that political conflict is present when issues are on the political and public agenda for weeks or months. Repeated exposure to ongoing conflict could in turn lead to fatigue, especially negative emotions, with the issue.

H5:　　Higher levels of conflict in the media coverage of an issue will lead to higher levels of issue fatigue.

Transferring Effects of Political News Coverage on Political Attitudes to Issue Fatigue

In addition to research on overexposure and fatigue phenomena, we consider news coverage effects on political attitudes, since issue fatigue is about an ongoing political issue. Research on the

effects of political news coverage has investigated the effects of news framing on negative political attitudes, such as political cynicism and distrust (Aalberg, Strömbäck, & de Vreese, 2012). News framing has an impact on the audience's interpretations, evaluations, and judgments (Price, Tewksbury, & Powers, 1997).

Game or strategy frames[2] as opposed to substantive or issue-based frames emphasize tactics and strategies of campaigning, election outcomes, and politicians' performance and battles for voters. In contrast, politics are framed as issues when the focus is on political content, specifically problems, solutions, implications, events, and politicians' opinions and actions (Aalberg et al., 2012; Shehata, 2014). Previous findings showed that strategic framing leads to higher levels of political cynicism about the issue, more negative thoughts about the issue, and a decreased interest (de Vreese, 2004; de Vreese & Elenbaas, 2008; Schuck, Boomgaarden, & de Vreese, 2013; Shehata, 2014). We assume that strategic framing can also cause fatigue from the ongoing issue in question, particularly with regard to negative emotions, annoyance, and anger, and a decreased motivation to process the information as dimensions of issue fatigue.

H6:   Higher levels of strategy versus substantive framing in the media coverage of an issue will lead to higher levels of issue fatigue.

Negative news frames (Balzarotti & Ciceri, 2014), negative as opposed to positive aspects of certain topics (Igartua, Moral-Tornazo, & Fernández, 2011), negative versus positive valence of news stories (McIntyre & Gibson, 2016), and adverse aspects, such as violence (Unz, Schwab, & Winterhoff-Spurk, 2008), can cause negative affective responses among the audience. When more negative news is consumed, users report increasingly negative emotions (de Hoog & Verboon, 2020). Negative news coverage can lead to fatigue from social problems (Kinnick et al., 1996). Thus, negative news coverage will likely cause negative emotions, particularly annoyance and anger, among the recipients when they are extensively exposed to the ongoing issue.

H7:   Higher levels of negativity in the media coverage of an issue will lead to higher levels of issue fatigue.

In sum, it is plausible that characteristics of the issue's news coverage, along with repeated exposure, lead to issue fatigue.

Methods

News coverage of ongoing issues potentially changes over time, leading to audience exposure to certain characteristics to different extents over weeks and months. To trace how the intensity and characteristics of news coverage of an ongoing issue affect audience fatigue over a period, we combine a three-wave panel survey with media content analysis. This enables better insights into the dynamics of media coverage effects than short-term experimental data and cross-sectional designs (de Vreese et al., 2017).

For this study, United Kingdom's exit (Brexit) from the European Union (EU) was chosen as an ongoing political news issue during the period of investigation. Brexit is a nonnational issue for

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[2] For a discussion on the distinction between game and strategy frames, see Aalberg and Curran (2012).

Switzerland, which was extensively covered in Swiss news media and can nevertheless have an impact on the Swiss economy and its relation to the United Kingdom. Thus, the issue allows some degree of involvement in it but does not concern the Swiss population as strongly as a national issue. It is therefore a suitable issue for observing potential overexposure effects. The spring of 2019 was considered a suitable investigation period because it covered several postponements of Brexit because of a lack of agreement on the exit conditions and the corresponding negotiations between the United Kingdom and the European Union under time pressure. Thus, this period is one of extensive exposure and with a particular thematic focus.

Content Analysis

The content analysis took place from March 25 to May 28, 2019, which corresponds to the period of 2.5 weeks before Wave 1 until the end of Wave 3 of the panel survey. The news reports covering the Brexit issue were collected from different databases, such as LexisNexis, Factiva, and archives of individual media outlets. Reports were coded if they appeared on front pages and political news sections of the selected media outlets and if the Brexit issue was mentioned in the report's headline or lead. We considered Swiss daily printed newspapers, online news sites, and television news, more precisely, those that were accessed by at least 1% of the Swiss population in 2018 (see Table 2 in the Supplemental Material file[3]), which resulted in 36 media outlets. In total, 1,275 reports mentioning Brexit were coded in German, French, and Italian language.

Five coders conducted the content analysis. They were fluent in at least two of the three languages. The coders were trained extensively during six sessions before the coding period. During the training sessions, the codebook was discussed, adapted, and supplemented by rules and coding examples in three languages. The coders were supervised during the coding period and sessions to exchange coding problems took place regularly.

The intercoder reliability test was conducted using 76 reports (a proportional mix of reports from printed newspapers, online news sites, and TV news series in German, French, and Italian language). To test intercoder reliability, we used Fretwurst's standardized Lotus coefficient (Fretwurst, 2015) because it is well suited for our multilanguage content analysis of different media types (print, online, TV news). Different combinations of coders coded the media reports from print/online and TV news in three languages. Therefore, we needed to calculate the intercoder reliability for each of the six combinations of language and media type separately with small samples. The Lotus coefficient can be directly interpreted as percentage agreement between coders (Fretwurst, 2015) and allowed us to compare the coders (for each category) in all combinations of language and media type. Furthermore, the standardized version we report, S-Lotus, considers the distribution of variables: First, it takes into account the number of categories used by the coders and, thus, corrects for chance. Second, it acknowledges skewed distributions, which we find in our variables. Variables with only a few categories usually achieve a higher reliability than variables with more categories (Aaldering & Vliegenhart, 2016; Fretwurst, 2015; Hopmann, Esser, & de Vreese, 2017). In addition, Lotus can deal better with multiple

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[3] The Supplemental Material file is available in the supplemental material under the following link: www.dropbox.com/sh/kufdac2oits9y5m/AADzIJkgv1eNu_O6ebETF94Ha?dl=0

coders than with Krippendorff's alpha. The intercoder reliability test including all content and formal variables showed an average S-Lotus value of .83, which is satisfactory.[4]

The following variables were coded in news reports about Brexit (the detailed coding instructions for each variable are reported in the Supplemental Material file): *Intensity* was measured by summing up the number of news items per media outlet per time period, which was later multiplied by the individual frequency of exposure. Second, we measured whether the news item presented new information as opposed to previously *established information* ($M = -0.80$, $SD = 0.46$, $n = 1,272$; S-Lotus = .86). Third, we measured how simple or *complex* ($M = -0.62$, $SD = 0.61$, $n = 1,272$; S-Lotus = .74) the depiction in the news item was. Fourth, we assessed whether the news item made use of *sensationalism* ($M = 0.23$, $SD = 0.42$, $n = 1,272$; S-Lotus = .82) and whether the news item was *personalized* ($M = -0.47$, $SD = 0.81$, $n = 1,268$; S-Lotus = .69) as opposed to substantive. Fifth, we measured whether the news item primarily presented *conflict* ($M = 0.58$, $SD = 0.71$, $n = 420$; S-Lotus = .73) as opposed to consensus-centered or balanced impressions of politics, conditions, and views. Sixth, we measured whether the news item mainly focused on substance or *political strategy* ($M = -0.70$, $SD = 0.62$, $n = 1,266$; S-Lotus = .84). Lastly, a scale from positive to negative tonality measured *negativity* ($M = 0.33$, $SD = 0.64$, $n = 1,272$; S-Lotus = .69). Except for negativity, which was measured on a five-point scale (ranging from −2 to 2), all variables were measured on a three-point scale (ranging from −1 to 1) in line with the scales established in previous studies.

Panel Survey

The respondents were recruited from the representative online access panel of a professional market and research institute. Quota sampling was applied with respect to age and gender. Wave 1 ($N = 1,338$, 50% female, $M_{age} = 48.27$, $SD = 16.02$, education = 44% tertiary education) took place on April 11–24, 2019, Wave 2 ($N = 985$, 49% female, $M_{age} = 49.31$, $SD = 16.04$, education = 44% tertiary education) on May 9–20, 2019, and Wave 3 ($N = 800$, 48% female, $M_{age} = 49.42$, $SD = 16.03$, education = 43% tertiary education) on May 29–June 11, 2019. We used a balanced sample of 636 respondents for the analyses because of the exclusion of those who dropped out after Wave 1 or Wave 2, did not access any media coverage on the issue via the suggested media outlets, or had missing values on the dependent variable. The sample ($M_{age} = 51.42$, $SD = 15.97$, 46% female, education = 46% tertiary education) differed only slightly from the original sample.

We measured the dependent variable issue fatigue in three waves.[5] Respondents were asked to indicate to what extent they agree or disagree with statements on Brexit. Nine items used in previous research for the processing involvement, information overload, and negative emotion dimensions were averaged to form a composite measure (w1: $M = 2.78$, $SD = 0.81$, $\alpha = .82$; w2: $M = 2.76$, $SD = 0.82$, $\alpha = .84$; w3: $M = 2.77$, $SD = 0.87$, $\alpha = .87$; $n = 636$).[6] The response options ranged from 1 (*I totally disagree*) to 5 (*I totally agree*). Processing involvement included the following items: I follow this issue

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[4] Table 1 in the Supplemental Material file displays coding instructions, indications, and reliability values for all content and formal variables. We accepted variables with an S-Lotus value below 80% given our study's multilanguage, multimedia type character.

[5] The questionnaire can be found in the Supplemental Material file under the following link: www.dropbox.com/sh/kufdac2oits9y5m/AADzIJkgv1eNu_O6ebETF94Ha?dl=0

[6] The issue fatigue scale was validated by confirmatory factor analyses (see Tables 14 and 15 in the Supplemental Material file).

with attention. It is important to me to know all arguments on this issue in detail. The more information I get on this issue, the better (all recoded) (Matthes, 2013). Information overload comprised the following items: I currently feel overloaded by the amount of news available on this issue. I receive more information on this issue than I can actually process. I am confronted with too much information on this issue. I feel overloaded by the amount of news on this issue (Lee et al., 2019). Negative emotions include the following items: This issue gets on my nerves. This issue makes me angry (Kuhlmann et al., 2014; Metag & Arlt, 2016).

News media use was measured by means of the list-frequency technique (Andersen, de Vreese, & Albæk, 2016) to measure both the specific source and the frequency of exposure in days per week. The media outlets in the panel survey correspond to those who were subject to content analysis.[7]

Data Analysis and Matching of Media Content Analysis and Panel Data

The media content analysis data set was aggregated by wave and media outlet, which enables calculating scores for every independent variable per outlet per wave (de Vreese et al., 2017). For each news characteristic measure, we built mean indices per outlet per time period. However, for the intensity measure, we computed an additive index of the number of news items per outlet per time period. Table 1 displays the mean scores of the received media content variables per outlet per wave.

Table 1. Descriptive Statistics of Media Content Exposure Variables.

	$t1$		$t2$		$t3$	
	M	SD	M	SD	M	SD
Intensity	45.51	40.73	16.31	15.66	21.66	20.43
Repetition	−2.09	1.52	−2.20	1.65	−2.12	1.67
Complexity	−1.93	1.65	−1.63	1.73	−1.78	1.57
Sensationalism	0.53	0.51	0.54	0.52	0.41	0.44
Personalization	−1.15	0.85	−1.40	1.11	−0.26	0.62
Conflict	1.42	1.15	1.10	1.07	1.61	1.26
Strategy framing	−1.81	1.37	−1.69	1.27	−1.69	1.21
Negativity	0.85	0.69	0.56	0.72	0.50	0.49

Note. n = 636; *t*1 = time period until the start of Wave 1 (March 25–April 10, 2019); *t*2 = time period until start of Wave 2 (April 11–May 8, 2019); *t*3 = time period until start of Wave 3 (May 9–28, 2019).

In the panel data set, we manually included the media content variables from the content analysis data set. We multiplied these by standardized media exposure variables, ranging from 0 (exposed to no edition) to 1 (exposed to all editions), for each time period for each respondent (following de Vreese et al., 2017). Since there was high multicollinearity between the independent variables on each wave, which is because of the linkage analysis procedure (see Table 4 in the Supplemental Material file), we ran a regression model for each independent variable separately. We ran lagged-dependent variable models with clustered observations, which control for the effect of the dependent variable in the previous wave. We included wave dummies to control for time effects (de Vreese et al., 2017) and age, gender, and education as control variables. All variables were z-standardized.

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[7] Table 2 in the Supplemental Material file displays the average frequency of exposure per news outlet.

Results

As shown in Table 2, Model 1, including only the lagged-dependent variable, the wave dummy, and sociodemographic variables, indicates that 59% of the variance of issue fatigue is explained by issue fatigue in the previous wave and the control variables. The lagged-dependent variable has a strong impact on the dependent variable. Time has no effect and gender has a positive effect on issue fatigue (women are more likely to be issue fatigued), while age and education have a negative effect in all models (except for age in Models 3 and 7). The older news users are and the more they are educated, the lesser their fatigue from the issue. The inclusion of any of the media content variables (Models 2–9) does not improve the model fit considerably. However, some of the variables have significant effects, and their inclusion in the model improves the preciseness of the results. To check the robustness of the findings, we consider alternative specifications and run three alternative models for each independent variable (b) without controlling for sociodemographic variables, (c) the independent variable weighted by the prominence of the media reports in terms of (audio-)visual material, and (d) the latter plus sociodemographic variables (see Tables 5–13 in the Supplemental Material file). We report discrepancies between model (a) and the alternative models when applicable.

First, we include the intensity variable (Model 2) to the lagged-dependent variable model, which indicates the number of news items to which a respondent has been exposed. Intensity of exposure to news items on the issue has no significant effect on issue fatigue. We thus reject H1. However, the more news users are exposed to repeated as opposed to new information on the issue, the more they are issue fatigued, which supports H2 (Model 3). H3 posits that increasing complexity in the news coverage leads to increasing issue fatigue (Model 4). The results support this hypothesis. Adding sensationalism to the empty lagged-dependent variable model (Model 5) does not yield an effect on issue fatigue. We thus reject H4a. Adding personalization (Model 6) to the empty lagged-dependent variable model does not yield an effect either, which leads us to reject H4b. However, personalization has a positive effect on issue fatigue ($b = .04*$; higher levels of personalization lead to higher levels of issue fatigue) when the variable is weighed by (audio-)visual material (Model 6c in the Supplemental Material file). Exposure to more conflict does not lead to increased issue fatigue, which is why H5 is rejected (Model 7). There is a negative effect ($b = -.05**$) when we use the weighted conflict variable (Model 7c in the Supplemental Material file). According to Model 8, the more news users are exposed to strategy framing of the issue, the more they become fatigued from the issue. This supports H6. Exposure to negative tonality in the news coverage (Model 9) has no significant effect on issue fatigue, which leads us to reject H7.

Table 2. Regression Models Predicting Issue Fatigue.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		Model 9	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Time	.03	.03	.04	.03	.03	.03	.03	.03	.03	.03	.01	.04	.04	.03	.03	.03	.03	.03
Issue fatigue $t-1$	.78***	.02	.78***	.02	.78***	.02	.78***	.02	.78***	.02	.78***	.02	.78***	.02	.78***	.02	.78***	.02
Sex	.04*	.02	.03*	.02	.03*	.02	.03*	.02	.04*	.02	.03*	.02	.03*	.02	.03*	.02	.04*	.02
Age	−.04*	.02	−.03*	.02	−.03	.02	−.03*	.02	−.04*	.02	−.04*	.02	−.02	.02	−.03*	.02	−.04*	.02
Education	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02	−.03*	.02
Intensity			−.05	.03														
Repetition					.04*	.02												
Complexity							.04*	.02										
Sensationalism									−.01	.02								
Personalization											.03	.02						
Conflict													−.04	.02				
Strategy framing															.04*	.02		
Negativity																	−.01	.02
Constant	−.02	.03	−.04	.03	−.02	.03	−.02	.03	−.02	.03	−.01	.03	−.02	.03	−.02	.03	−.02	.03
R^2	.59		.59		.59		.59		.59		.59		.59		.59		.59	
n	?62		?62		?62		?62		?62		?62		?62		?62		?62	

Note. *p* < .05; **p* < .01; ***p* < .00; sex (0 = male; 1 = female); education (1 = tertiary education). Cells contain unstandardized (*b*) coefficients with robust clustered standard errors (*SE*).

Discussion

Some politically relevant issues, such as Brexit or the coronavirus, have been on the media agenda for weeks, months, or years. Researchers and journalists claim that news media coverage of the issues leads to audience fatigue from these issues (Bedingfield, 2020; Burack, 2020; Newman et al., 2019). Hence, we investigate how news media contribute to fatigue from ongoing issues, which can have detrimental effects on people's knowledge and opinion formation about such issues. Furthermore, it is problematic against the backdrop of the general public's increasing tuning out of news media, a phenomenon observed in several countries over the past few years (Skovsgaard & Andersen, 2020).

Research on the effects of repeated exposure to persuasive stimuli has found that a high intensity of exposure to a persuasive stimulus can lead to negative attitudes toward the stimuli (Calder & Sternthal, 1980). Our results show that how frequently users are exposed to the issue via news coverage or how much information on the issue they receive from news media has no significant effect on how fatigued they are from the issue. Thus, our findings are neither in line with previous findings on the positive effects of repetition nor with those on negative effects. We know from advertising wearout that not only the overall frequency of exposure but also the interval and the overall duration of exposure are relevant (Corkindale & Newall, 1978). Considering these more specific intensity factors would enable more profound insights into the effects of exposure intensity on issue fatigue. Most important, we have considered exposure intensity only via news media; users can encounter the issue via social media and interpersonal encounters, which has not been measured in this study. We see this as a central reason for the nonsignificant effect of exposure intensity on issue fatigue.

Furthermore, we can assume reciprocal effects of issue fatigue on exposure intensity. Since Brexit has been on the media agenda before the investigation period and fatigue can cause avoidance of the issue (Gurr & Metag, 2021), it is possible that fatigue has already led to some users' decreased exposure to the issue, balancing out positive and negative effects of intensity on issue fatigue.

The findings show that repetition and complexity are relevant for issue fatigue. The positive effect of repetitive information as opposed to new information is in line with the assumption on repetition effects that after overly frequent exposure, the stimulus is perceived as less novel and stimulating after a phase of positive associations because of familiarity (Berlyne, 1970). Although most news reports should cover new events (Harcup & O'Neill, 2001), repeated information is included to catch up on previous developments about the issue. When users are increasingly exposed to repeated information, their fatigue increases as well. This supports the results of qualitative research on issue fatigue, that is, news users negatively perceive a lack of novelty (Gurr & Metag, 2022; Kuhlmann et al., 2014). As assumed from research on information overload (Jackson & Farzaneh, 2012; Schneider, 1987), a complex depiction of events about the issue leads to negative cognitions and emotions. We assume that exposure to information on an issue that is complex and difficult to understand causes the feeling of being overwhelmed and decreases the motivation to process information on the issue.

Out of the predictors derived from research on the effects of political news coverage on political attitudes, only higher levels of strategic as opposed to substantive framing of the issue lead to higher levels

of issue fatigue. Similar to political cynicism toward the issue (de Vreese, 2004), focusing on political strategy and tactics leads to users' negative audience perceptions of the issue.

We performed a content analysis of reports on Brexit in the headlines and leads of newspapers, online sites, and television news. It is thus highly probable that attention-catching elements occur in the news coverage on this prominent issue, which can increase users' motivation to engage in the issue and thus counteract the state of issue fatigue. Based on the findings that conflict and negativity in the news generally lead to negative audience responses (Lengauer et al., 2012), such as negative emotions (e.g., McIntyre & Gibson, 2016), and fatigue from social problems (Kinnick et al., 1996), we assumed that negativity contributes to issue fatigue. However, negative stimuli generally elicit more attention than positive ones (Smith, Cacioppo, Larsen, & Chartrand, 2003). "Bad news" (Harcup & O'Neill, 2017, p. 1471) is newsworthy and thus might have a positive effect on the audience's motivation to engage in the issue.

Similarly, higher levels of personalization and conflict in the news did not lead to higher levels of issue fatigue. Prominent or elite persons in the news and conflict are relevance indicators for the audience and can be considered news factors guiding the audience's perception of issue salience and selection processes (Eilders, 2006). Thus, news reports with a focus on political persons and conflict likely counteract fatigue perceptions. Our analyses suggest that characteristics that are claimed to make news stories newsworthy do not lead to fatigue. Future research should investigate more closely the role of news factors for the emergence of fatigue from ongoing issues in the news.

Ernst, Kühne, and Wirth (2017) have investigated interactive effects of message negativity and repetition on credibility of political statements and found that a high number of repetitions had only an indirect negative effect on attitude through message credibility when the message was negative. This finding highlights the importance of investigating also how the interaction of exposure intensity and news coverage characteristics, such as negativity, influences issue fatigue.

The effects are generally weak, and only three out of seven media coverage characteristics have significant effects. Previous research has shown that the more audience members are issue fatigued, the more negatively they evaluate the issue's news coverage regarding quality and impartiality (Gurr, 2022; Kuhlmann et al., 2014; Metag & Arlt, 2016). This leads us to assume that a subjective perception of the media coverage is equally or even more influential for issue fatigue. Along with repeated exposure to news about the issue, audience members perceive them as repetitive, although the reports feature new information. This phenomenon resembles hostile media perceptions; audience members perceive news coverage on an issue as biased against their own viewpoint, although the news coverage is balanced (Vallone, Ross, & Lepper, 1985). Future research should thus consider individual perceptions of news coverage and analyze their causal relation to issue fatigue over time. Additionally, future research should take into account individual characteristics, such as personality traits, news enjoyment, or attitudes (e.g., toward the issue), for issue fatigue.

Limitations

The analyses have several limitations that we need to consider when interpreting the results. Despite the potential of linking media content and panel survey data for testing media effects (de Vreese et al., 2017), measurement error is problematic because it stems from two sources (media content analysis and survey) and biases the estimates (Scharkow & Bachl, 2017). For the independent media content variables, we coded news reports from different media types (print, online, and television) in three different languages, which led to acceptable but imperfect intercoder reliability. Measurement error in the survey and media content analyses thus likely leads to down-biased estimates and to an underestimation of the media effects of our study (Scharkow & Bachl, 2017). Nevertheless, longitudinal linkage analyses are still better suited for measuring media effects than cross-sectional studies.

Our findings are also limited by the rather short period of 12 weeks. News media coverage during the investigation period was particularly extensive and focused on a particular subissue, specifically the negotiations between the United Kingdom and the European Union concerning the exit conditions. However, the Brexit issue had been on the news media's agenda for a long time before this study began, before the Brexit referendum in the United Kingdom in June 2016. Thus, it is possible that some users had become fatigued before this study and that we thus did not cover the effects of news coverage on issue fatigue in our investigation period. Related to this, our findings are limited because we analyzed media effects only for the Brexit issue. Further research for other ongoing issues in other countries is necessary to validate our findings. Considering issues with different characteristics, for instance, domestic versus international or obtrusive versus unobtrusive, would shed light on the role the type of issue plays for issue fatigue. A longer time period with more points of survey measurement, particularly of exposure to news outlets, would be promising.

Conclusion

Despite these limitations, our study is the first to investigate causal effects of news coverage characteristics on audience issue fatigue, against the background of news users' fatigue from ongoing issues, as recently observed for several issues. The findings from a linkage analysis of a three-wave panel survey and a media content analysis on the Brexit issue in Switzerland show that repetition, strategy framing, and complexity in the news coverage lead to increasing issue fatigue, while intensity of received coverage, sensationalism, personalization, conflict, and negative tonality have no effect. Knowledge on which characteristics of their reporting cause fatigue from ongoing news issues is relevant for journalists who can thus be sensitive to the effects of this kind of reporting on the audience and can consider these effects in how they cover the issue. Political communication practitioners can accordingly adjust their communication activities that are interrelated with news coverage about a political issue. Although our findings indicate that some news coverage characteristics are influential, they also point to directions for future research. There is a need to study subjective perceptions and individual characteristics as drivers of issue fatigue to identify strategies to avoid this phenomenon.

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