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A Systematic Review of Responsibility Frames and Their Effects in the Health Context

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Responsibility frames potentially shape the public perception of health issues such as obesity, diabetes, or mental illness, specifically regarding responsibility attributions for their causes and treatment. Which responsibility frames prevail in the health context, and the responses they may elicit from audiences, has not been studied systematically. This systematic review includes studies with different methodological approaches published between 2004 and 2019 (N = 68). Content analyses (n = 56) show that different media attribute health responsibility most frequently, but not exclusively to individuals. Individual responsibility was especially emphasized for obesity, which was also the most studied health issue. Tendencies toward societal attributions of responsibility emerged over time, particularly regarding health risks for which the frames describe a specific cause (e.g., sugar, trans-fat). Experimental studies (n = 12) indicate that individual responsibility frames reduce policy support. The effects of responsibility frames were, however, not as clear-cut as expected with research gaps regarding behavioral and affective outcomes. Overall, there is a clear emphasis on noncommunicable diseases in this field. Finally, the conceptual focus on individual vs. societal health responsibility distracts from social network influences as another relevant health determinant. The implications for health communication are discussed.

In communication, framing describes the process in which certain aspects of an issue are highlighted, whereas others are left out (Entman, 1993). Frames that assign responsibility for causing and/or treating health issues to different influence levels such as individuals, social relationships or society are defined as *responsibility frames* (Iyengar, 1991; Semetko & Valkenburg, 2000). Since frames "encourage target audiences to think, feel, and decide in a particular way" (Entman, 2007, p. 164), responsibility frames may shape recipients' responsibility beliefs, their emotions, and behaviors. Moreover, attribution theory (Weiner, 2006) suggests that individual attributions of responsibility may contribute to the stigmatization of people affected by certain health issues (Frederick, Saguy, & Gruys, 2016; Puhl & Brownell, 2003).

Due to their significance in shaping public opinion, the body of research on frames and responsibility frames in health communication has been growing over the years (Guenther, Gaertner, & Zeitz, 2020; Kim, 2015). Systematic investigations of framing research are also necessary to systematize the used methodologies, findings, and point out perspectives for future research (see Matthes, 2009). While several systematic reviews in communication science have addressed aspects of framing (Borah, 2011; Dan & Raupp, 2018; Guenther et al., 2020; Matthes, 2009), none of them has focused on responsibility frames. Therefore, the first objective (1) of this review is to synthesize the conceptual and methodological foundations of the published literature on responsibility framing in health communication.

By applying *social-ecological models* (Golden & Earp, 2012; Sallis, Owen, & Fisher, 2015) to the concept of health responsibility, we can identify at least three influence levels at which responsibility can be attributed: 1) the individual, 2) the social network, and 3) the society. The individual level includes all causes and treatments of health issues which are internal to the individual, including genetic and behavioral ones. On the social network level, responsibility is attributed to micro-level social structures, i.e., formal relationships (e.g., doctors), informal relationships (e.g., spouses), or group social norms. The societal level entails all external causes and treatments relating to overarching structures like policies, economy, or broader cultural and societal norms. Although scholars regularly contrast responsibility on the individual vs. the societal level, the social network level can be clearly differentiated from the two, because it encompasses a person's immediate social environment (Moran et al., 2016).

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In Western, individualistic societies, the discourse of individual health responsibility is especially pronounced (Triandis, 1995). Nevertheless, there is also evidence that media attribute responsibility to societal actors in some cases, e.g., certain industries or the government (Buckton et al., 2018; Jarlenski & Barry, 2013). This indicates that individual attributions of responsibility are not necessarily universal, but that it depends on the context how health responsibility is attributed in media. A systematic review would help to identify these different contexts. Accordingly, our second objective (2) is to systematize the results from media content analyses investigating health responsibility frames at the level of the individual, the social network, and society.

Through attributional processes, responsibility frames may influence responsibility beliefs and policy opinions (Iyengar, 1996), as well as social behaviors (Weiner, 2006). Ultimately, attributions of responsibility might even enable or prevent policies that would help affected individuals (Wikler, 2002). However, a detailed overview of the possible outcome variables which may be influenced by responsibility frames is still lacking. Our final objective (3) is to review the extant research on the effects of responsibility frames in the health context, paying particular attention to the potential outcome variables and contexts of these effects. Overall, it is the goal of this systematic review to give an overview of the current state of research on responsibility frames and detect possible gaps in the literature. We thereby refine and extend existing systematic reviews focusing on framing in the health context more broadly (Dan & Raupp, 2018; Guenther et al., 2020).

Methods

Systematic Review Methodology

As both systematic and narrative reviews possess their own strengths and can be seen as complementary to each other (Greenhalgh, Thorne, & Malterud, 2018), we combined them. See Figure 1 for details on the research process. A partially standardized procedure seemed appropriate for the diverse methodological approaches (quantitative and qualitative content analyses, experiments). In this way, the descriptive results meet the quality standards of systematic reviews (Moher, Liberati, Tetzlaff, & Altman, 2010), while the qualitative analysis following Mayring (2014) facilitates a deeper understanding of the evidence on health responsibility frames and their contexts. Hence our approach can be described as a mixed studies – mixed methods review (Grant & Booth, 2009).

Search Strategy

To find all eligible studies, we searched five databases – two with a focus on behavioral science and medicine (PsycINFO, PubMed) and three with a focus on communication studies (Communication & Mass Media Complete, Communication Abstracts, Communication Source). Searches were conducted in May 2019 using a Boolean search string (see supplementary Figure a).

The searches were limited to title, abstract, and keywords. We did not have any restrictions regarding the publication date. To identify additional records, we used the same search terms to scan the general databases Scopus, Web of Science, and Google Scholar. Moreover, we considered the reference lists of eligible papers and a related systematic review of frames in news reporting for health risks (Dan & Raupp, 2018).

Data Selection

See Figure 2 for the flow diagram. The review protocol can be retrieved from PROSPERO, where this systematic review has been registered prospectively (CRD42020143050). Studies had to 1) be content analyses or experiments, 2) refer explicitly to responsibility framing and/or attributions of responsibility through 3) publicly available media outlets, including journalistic, entertainment, public relations, and user-generated media.

From the $N = 545$ results of database and hand searching, $n = 92$ articles were initially assessed for eligibility through the screening of titles and abstracts. After reading the $n = 92$ full text articles, a total of $n = 26$ articles were excluded, because they did not relate to the concept of responsibility framing ($n = 14$) or did not differentiate between influence levels ($n = 7$). A total of $n = 66$ articles were thus deemed eligible. See supplementary table a for detailed inclusion and exclusion criteria. Some of these articles included more than one study, leaving us with a final sample of $n = 68$ individual studies published in $n = 66$ articles. The data were extracted using a piloted codebook. The formal categories were derived from published health communication reviews (Guenther et al., 2020; Dan & Raupp, 2018). The unit of analysis was the individual study.

Intercoder Agreement and Quality Assessment

To ensure intercoder reliability in the quantitative content analysis, $n = 16$ studies from the final sample were randomly selected. Three independent coders achieved an agreement of α (Krippendorff's *alpha*) ranging from .382[1] to 1. We evaluated the study quality based on criteria from a critical appraisal tool for systematic mixed studies reviews (MMAT[2]; Hong et al., 2018, see supplementary tables b and c for the scoring instrument).

[1]Only one variable ("influence levels" among experiments) was below the minimum of $\alpha = .667$ (Krippendorff, 2004a). We address the poor reliability of this variable in the discussion.

[2]The MMAT is a critical appraisal tool which helps evaluate the methodological quality of studies in systematic reviews. The MMAT was selected because it is specifically designed for mixed studies systematic reviews, i.e., systematic reviews that include studies with different methodological approaches (quantitative; qualitative content analyses; experimental studies). The quality criteria were specified to meet scientific standards for qualitative and quantitative content analyses (Krippendorff, 2004b; Mayring, 2014) as well as experimental studies (Field & Hole, 2003). See Tables 1a and 1b for a description of the quality criteria and scoring system.

[3]We have structured the results section to first state the descriptive results (*n*'s) of the review (quantitative analysis). This is followed by a narrative review (qualitative analysis) for each finding.

Table 1. Predominant Health Responsibility Frames in Media Content Analyses

Individual responsibility (n = 29)	Social network responsibility (n = 1)	Societal responsibility (n = 8)	Mixed results (n = 15)
Barry et al. (2013c),Bonfiglioli et al. (2007), Bonfiglioli et al. (2011), Browne et al. (2018), Chau et al. (2017), Cho (2006), Clarke & Van Amerom (2008), De Brún et al. (2012), Gearhart & Trumbly-Lamsam (2016), Gollust & Lantz (2009), Gounder & Ameer (2018), Henderson et al. (2009), Kim et al. (2007), Kim et al. (2010), Kim et al. (2015), Kim et al. (2017a), Kim et al. (2017b), Luisi et al. (2018), Martin et al. (2014), Mastin & Campo (2006), Nagler et al. (2016), Nimegeer et al. (2019), Peng & Tang (2010), Stefanik-Sidener (2012), Thomas et al. (2017), Van Hooft et al. (2018), Yi et al. (2012), Yoo & Kim (2012), Zhang et al. (2016)	Mello & Tan (2016)	Buckton et al. (2018), Higgins et al. (2006), Knight et al. (2016), Lucyk (2016), MacKenzie et al. (2008), Miller (2014), Park & Reber (2010), Zhang et al. (2014)	Barry et al. (2011), Bie & Tang (2015), Carlyle et al. (2018), De Brún et al. (2013), Hilton et al. (2012), Islam & Fitzgerald (2016), Kang et al. (2016), Lawrence (2004), Pietracella & Brady (2016), Sandell et al. (2013), Shugart (2011), Wu (2017), Yang & Parrott (2018), Ye & Ward (2010), Zhang & Jin (2015)

Includes only the n = 53 content analyses examining two or more influence levels.n = 3 content analyses (D'Angelo et al. (2013), De Souza (2007), and Jarlenski & Barry (2013) only measured responsibility frames on one level (society) and thus are not included in this table.A responsibility frame was coded as predominant when it was reported as more frequent than other frames in one study.Studies were classified as having mixed results if none of the responsibility frames could be identified as predominant.

Results[3]

Study Characteristics

Out of N = 68 individual studies, n = 56 content analyses examined the responsibility framing of health issues in media coverage. The remaining n = 12 studies were experiments investigating the effects of responsibility frames on recipients. Of the content analyses, n = 39 used quantitative and n = 11 used qualitative methodology. Six content analyses used mixed methods or did not specify if they used a qualitative or quantitative approach.

Regarding the examined health issues, there is an emphasis on noncommunicable diseases and their risk factors. The responsibility framing of communicable diseases was only examined in n = 4 content analyses out of N = 68 studies. Overall, the most common health issue was obesity, which was analyzed in n = 24 studies, followed by diabetes (n = 6), depression (n = 5), and cancer (n = 5).

Newspapers were the most researched medium in n = 41 content analyses. The second most researched medium was TV news, but only by content analyses (n = 17). None of the experiments included any stimulus material from TV news, but mostly used online news articles as a stimulus.

Conceptually, many studies (n = 41 studies; n = 29 out of 56 content analyses, n = 11 out of 12 experiments) cited Iyengar's (1990, p. 1991) notion of episodic/thematic framing as their theoretical basis, followed by Entman's (2004, p. 1993, 2007) widely accepted framing definitions in n = 30 studies (n = 24 content analyses, n = 6 experiments). Except for two studies (C13, C23),[4] all studies compared responsibility for health issues on the individual versus societal levels. Individual responsibility was frequently separated into controllable (e.g., lifestyle) and uncontrollable (e.g., medical) causes and treatments. Societal responsibility was typically operationalized as part of societal systems (e.g., the government) depending on the examined health issue (e.g., the food industry as a societal cause of childhood obesity; Barry, Brescoll, & Gollust, 2013). Despite the criticism of Iyengar's concept (Shah, Kwak, Schmierbach, & Zubric, 2004; Shugart, 2011), n = 8 studies (C11, C16, C41, C42, C49, E3, E9, E11) equated episodic frames with individual responsibility and thematic frames with societal responsibility, while only one (E7) defined the episodic and thematic characteristics independently from attributions of

[4]Absolute frequencies and overarching findings are reported with the serial numbers of the reviewed studies. Content analyses are indexed with serial numbers beginning with C (e.g., C50), while serial numbers beginning with E. (e.g., E1) refer to experiments. Citations are used when results from individual studies are reported. All studies and serial numbers are summarized in the supplementary Tables a and b, which list content analyses and experiments separately and alphabetically.

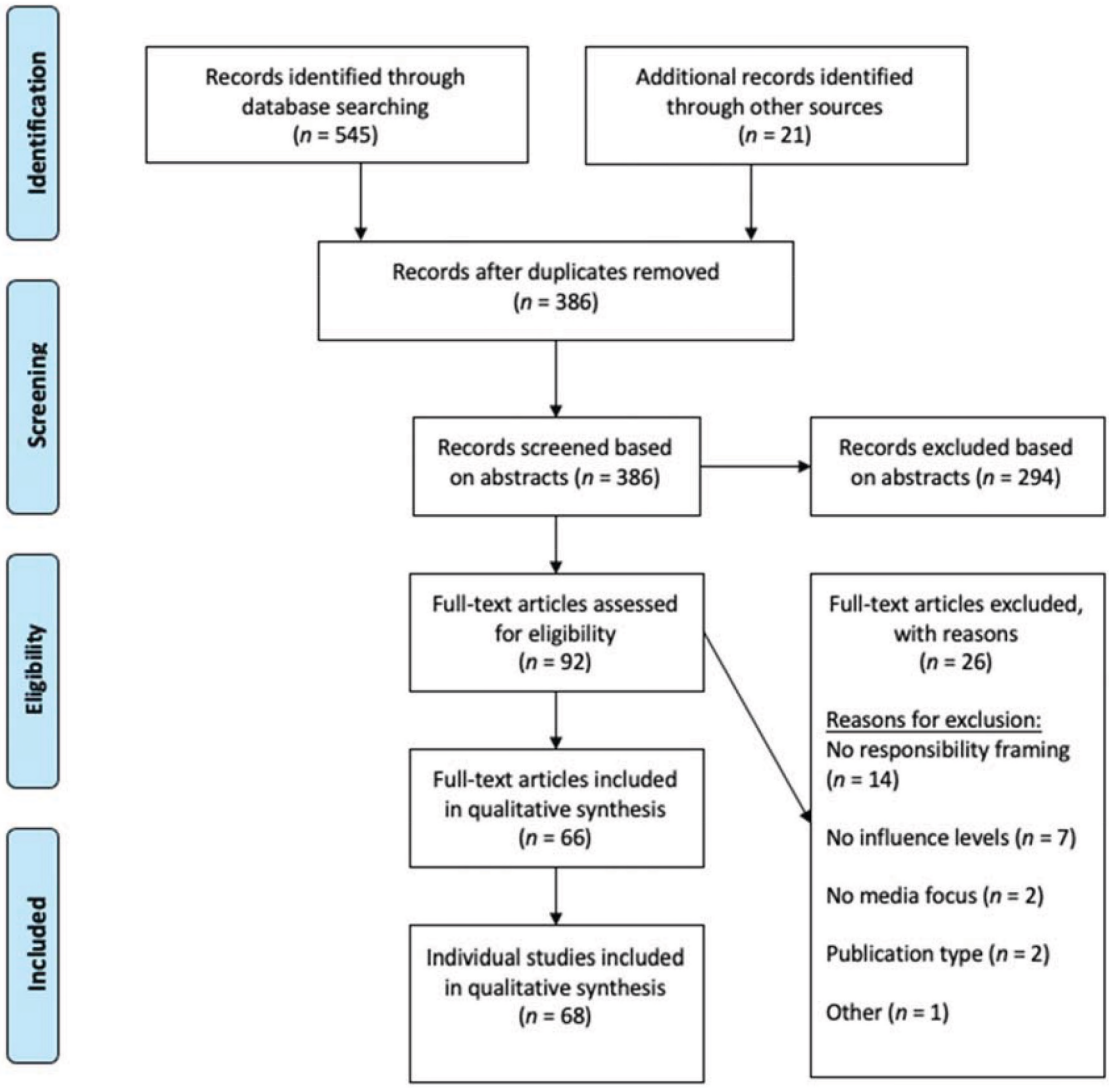

Figure 1. PRISMA Flow Diagram Illustrating the Selection Process.

responsibility. A relatively small number of studies (n = 18) addressed a level in between the individual and society, and only n = 8 studies included the social network level explicitly.

The quality of the content analyses in this review ranged from 3–10 (M = 6.61) with a potential maximum of 10 on the MMAT-based quality score, while the quality of the experiments ranged from 1–5 (M = 3.62) with a potential maximum score of 6. Thus, the study quality was overall acceptable, with few exceptions with low quality (indicated by values of 0–3 for content analyses and 0–1 for experiments). We followed MMAT's instruction to not exclude low-quality studies but to include and critically examine their findings instead (Hong et al., 2018, p. 1). A summary of all study characteristics and findings can be found in the supplementary material (tables d and e).

Evidence From Content Analyses

Individual Responsibility for Health Issues

Predominant health responsibility frames are presented in Table 3. Over half of the content analyses (n = 29 out of n = 56) found that individuals were held mostly responsible for causing and/or solving diverse health issues, ranging from diabetes (Stefanik-Sidener, 2013) and depression (Zhang, Jin, Stewart, & Porter, 2016) to health care costs (Kim, Tanner, Foster, & Kim, 2015) and cancer (Clarke & van Amerom, 2008). The quality scores of these 29 studies ranges from 3–10, with an average of 7, indicating acceptable study quality. Individual responsibility was especially emphasized for obesity, which is partially explained by the fact that obesity is the most prevalent topic studied. Three studies with generally acceptable quality (C7, C35, C36), two of which qualitative content analyses, provided evidence that individual responsibility was especially emphasized for women.

Social Network Responsibility for Health Issues

Responsibility on the level of the social network was rarely examined in the reviewed studies (quality scores 3–8), and it was even more rarely found to be attributed to the social network within media coverage. We found that responsibility frames at the social network level were often conflated with the individual and societal level in these and other studies (e.g., Zhang et al., 2016), which limits the strength of the findings at this level. While interpersonal responsibility for preventing intimate partner violence gained some visibility on Pinterest and elicited high engagement (Carlyle, Guidry, & Burton, 2018), news media largely ignored the role of the social network with respect to sedentary behavior (Chau et al., 2017), social determinants of health (Lucyk, 2016), cancer, and heart disease (Clarke & van Amerom, 2008). Parents present an exception to this rule, as responsibility for children's health was frequently attributed to them in the cases of problematic alcohol consumption (Pietracatella & Brady, 2016), childhood obesity (Barry et al., 2013c) and environmental health risks (Mello & Tan, 2016). The latter was the only study to find a clear emphasis on parental responsibility, i.e., a predominance of social network responsibility frames.

Societal Responsibility for Health Issues

Societal-level responsibility frames were predominant in a minority of $n = 8$ studies. Attributions on the societal level could be observed in some contexts, i.e., sugar, trans-fat, tanning beds, and gambling (C8, C23, C34, C38). The noted studies examined health risks with a specific problem definition, which in part is already situated outside the individual. This insight adds to the research on health-related responsibility frames in so far as an increase in societal responsibility frames is often predicted (Shugart, 2011; see e.g., Kim & Anne Willis, 2007), but an emphasis of societal responsibility is rarely found in health issues with a broader problem definition like obesity, depression, or diabetes. The quality of the mentioned studies ranges from *acceptable* to *high* (4–9), suggesting that the relative scarcity of societal responsibility frames as well as their prevalence in specific contexts is a relatively robust outcome.

Mixed Results and Opposing Trends

Trends Over Time

Responsibility frames for health issues are not always stable over time. Seven studies with a quality range of 4–10 (acceptable–high; C11, C21, C25, C27, C31, C55, C56) found fluctuations in responsibility attributions over time: Attributions to the societal level increased for breast cancer, obesity, and depression (C11, C25, C31, C56), and attributions to the individual level increased for rising health care costs (C27). Two studies (C21, C55) observed divergent trends, as causal and treatment responsibility developed in different directions.

Cultural Context

Additional exceptions to individual attributions of responsibility were reported in studies conducted outside the Western context, particularly in India and China. The results of four studies with acceptable to high quality (4–10; C15, C50, C54, C55) indicated that online media and newspapers in collectivist (versus individualist) societies adopted a more collective perspective on responsibility for HIV/AIDS, depression, and schizophrenia.

Communicator Characteristics

Furthermore, the communicators appeared to play a role in responsibility framing, as different attributions of responsibility were found between different sorts of media texts (i.e., journalistic texts as compared to press releases from public health associations and user-generated content). While individual attributions were clearly dominant within journalistic texts, health associations acknowledged social and structural influences more than did traditional news media (C30, C41) – perhaps because they inherently have a public health perspective, or to promote health policy action. Slight trends toward less individual responsibility were found in studies looking at user-generated content on social networking sites like Pinterest and YouTube (C9, C24, C53), which might be explained by the fact that individual online users are not bound by editorial rules, but motivated to learn or socially engage (Oh & Syn, 2015). All studies examining these non-journalistic media outlets are in the acceptable quality range with scores from 4–7.

Evidence From Experiments

Attributions of Responsibility

Attitudinal effects mostly included beliefs about who is responsible for causing and/or solving issues, also referred to as *attributions of responsibility*. In this review, $n = 6$ out of 12 experiments measured attributions of responsibility as a dependent variable (E3, E8, E9, E10, E11, E12). The experiments with *low* to *acceptable* quality did not find the clear effects of responsibility frames on attributions that we would expect based on the findings of Iyengar (1991) and attribution theory (Weiner, 2006). There are also some conceptual concerns with these studies which require a closer consideration.

Major (2018) observed that people exposed to episodic frames attributed more causal responsibility to society. Episodic frames were operationalized as stories focusing on an individual with depression, but insurance was presented as a societal solution in the same stimulus. Despite its otherwise acceptable quality, reviewing this study by Major (2018) highlights that equating episodic frames with responsibility frames on the individual level can present a problematic simplification: News stories can still place responsibility for an issue within a larger societal context despite identifying an individual who is affected by this issue.

Sun, Krakow, John, Liu, and Weaver (2016) revealed that a news article with a societal frame made participants more likely to attribute responsibility for obesity to society, but the individual frame did not change attributions. Although this study by Sun et al. (2016) did not have the same conceptual issues, its findings should be interpreted with caution due to the low quality score. Moreover, there were no significant effects of societal-level responsibility frames on attributions of

responsibility for obesity, diabetes, immigrant health, and smoking in an experiment conducted by Coleman, Thorson, and Wilkins (2011). Two studies were consistent with Iyengar's finding that episodically framed stories elicited individual attributions of responsibility and that thematically framed stories led to more societal attributions (E9, E11). In both studies, responsibility frames were combined with additional message characteristics (gain/loss frames, negative vs. positive stories) without confounding them. However, given the quality and conceptual concerns in these studies, the results on attributions as a dependent variable have little informative value.

Policy Support

In $n = 5$ studies (E1–E5), the effects of responsibility frames on some form of health-related policy support were measured. Policy support was typically operationalized as the participants' self-reported level of support for any specific policies or government interventions.

While the findings from reviewed studies on attributions were ambivalent, we found robust support for the effects of responsibility frames on policy support reviewing the experiments. The quality of the studies with policy support as a dependent variable was in the acceptable range (3–4). Coleman et al. (2011) showed that reading societal information in health news articles led to a significant increase in policy support. Consistent with this, two experiments by Barry et al. (2013) showed that news frames focusing on an individual obese child lowered levels of policy support. Thus, consistent with attribution theory (Weiner, 2006), policies are more likely to be supported when a health issue is presented as individually uncontrollable (genetic or societal). If, on the other hand, the issue is portrayed as individually controllable, policy support tends to decrease. One high-quality study (Gollust, Lantz, & Ubel, 2010) tested the effects of images in addition to diabetes responsibility frames, taking respondents' spending preferences and stereotypes into account. In line with the results on policy support, the behavioral choices (i.e., controllable) frame increased negative stereotypes of people living with diabetes, while social determinants and genetic (i.e., uncontrollable) frames increased support for diabetes research spending.

Behavioral Intentions

Only three studies examined how responsibility frames impact people's behavioral intentions (E3, E10, E12). In the study by Sun et al. (2016), the societal frame increased interpersonal and participatory behavioral intentions; treatment attributions mediated the relationship between causal attributions and behaviors. Results of an experiment by Major (2018) showed that only loss-framed depression news increased people's civic engagement intentions; responsibility frames alone did not have any effects. Regarding individual behavioral intentions, one experiment (Coleman et al., 2011; E3) suggested that responsibility attributions to the societal level have the potential to change not only policy support but also people's own health-related behavior. The informative value of these findings is questionable due to quality concerns, differences in operationalization, and ultimately, the small number of studies that examine behavioral effects at all.

Emotions

Emotions were examined by only $n = 2$ studies with acceptable quality (E8, E9), although they are a crucial variable in attribution theory (Weiner, 2006). In both studies, responsibility frames had significant effects on positive and negative emotions. However, since both studies conflated the episodic/thematic and responsibility frame dimensions, it is unclear which dimension accounted for these effects.

Interaction Effects

Evidence from $n = 2$ studies indicates that responsibility framing effects might depend on individual characteristics like gender and political attitudes. Garbarino, Henry, and Kerfoot (2018) revealed that men exposed to a genetics frame of obesity demonstrated significantly greater support for certain policies. Jin, Zhang, Lee, and Tang (2018) found that male and female participants reacted differently to individual depression news frames. Moreover, Republicans were less susceptible to the influence of societal frames on societal attributions than Democrats (Gollust, Lantz, & Ubel, 2009).

Discussion

Methodological Aspects of Studies

Within the published research literature on responsibility frames in the health context and their effects, we found $n = 56$ content analyses and $n = 12$ experiments. This finding highlights that responsibility frames in news media are relatively well-studied, in contrast to their effects.

Conceptual Issues of Studies

Conceptually, research on responsibility frames in health communication is not very clear-cut: their responsibility dimension is often entangled with the general focus differentiating between episodic and thematic frames (see Reinemann, Stanyer, Scherr, & Legnante, 2012). While episodic frames focus on individuals or single events to illustrate issues, thematic frames place issues in a broader context using more general evidence (Iyengar, 1991). Hence, episodic frames are thought to draw the recipients' attention more to individual causes and solutions of health issues, while thematic frames should make socio-structural causes and solutions more salient for the audience (Kim, 2015). Although these frame dimensions are conceptually different, episodic frames are oftentimes treated equal to individual attributions of responsibility, and thematic frames equal to societal responsibility (Shah et al., 2004). However, not every episodic story is equivalent to an attribution of responsibility to the individual, and societal responsibility attributions are not automatically present in thematic stories. Few experimental studies have recognized this important conceptual distinction

between episodic/thematic framing and attributions of responsibility. This is also reflected by the fact that the "influence levels" variable for the experiments is the only variable in our systematic review with an unacceptable reliability value (Krippendorff's *alpha* = .382). Through confounding and heterogeneous interpretations of the different frame dimensions, it is difficult to determine the actual influence levels in the experimental studies. Therefore, no conclusions can be drawn about which dimensions of the responsibility frames have what effects.

In addition, the dualistic concept of episodic/thematic frames disregards the significance of meso–level, social influences on health (Holt-Lunstad & Uchino, 2015).

Predominance of Individual Responsibility Frames

Overall, there is moderate to strong evidence that news media attribute health responsibility to individuals. Individual responsibility was especially emphasized in the media coverage about obesity, which was also the most researched health issue. The distortion toward individual responsibility not only ignores the fact that relationships within a social network and societal influences are relevant to human health (Holt-Lunstad & Uchino, 2015; Sallis et al., 2015) but may also have consequences for people affected by health issues like obesity, such as stigmatization or punitive policies (Frederick et al., 2016). Thus, a more balanced reporting of the influence levels of health responsibility would be desirable.

Tendencies Toward More Societal Responsibility

Despite the emphasis on individual responsibility, there is also evidence that attributions of responsibility in media are subjected to a constant negotiation of different perspectives and interpretations. While some studies reported periodic fluctuations in different responsibility frames, there were also tendencies toward more societal responsibility in non-journalistic publications, in some categories of user-generated content in social media, and for health issues with a more specific problem definition.

Cultural Differences

There are indications of cultural differences in the attribution of responsibility between individualist and collectivist societies, particularly the U.S. and China. Even though these findings further highlight the notion that health is a highly individualized matter in many Western countries (Wallack, 1993), the evidence is not enough to make generalized statements about collective health responsibility in Asian countries. In addition, this observation might be confounded by the examined health issues (three of which are mental health issues, and one is a communicable disease). Therefore, more comparative analyses of responsibility frames in different health issues and cultures are needed.

Neglection of the Social Network Level

Overall, only one study in our review found a pronounced attribution of responsibility to the social network level. However, since few content analyses (n = 8 out of N = 56) have differentiated this level altogether, it is unclear whether this reflects the actual prevalence of responsibility attributions to the social network.

The neglection of responsibility frames outside the individual might be partly explained by journalistic practice. Episodic stories do not require expert knowledge by the reporter since there is no need to interpret statistics or unravel complex social interrelations (Iyengar, 1996). Furthermore, it is assumed that individual treatments can be implemented more easily than social or structural changes (Kim & Anne Willis, 2007). A focus on episodic health stories also fits into the notion of an increased "softening" of news (Reinemann et al., 2012).

None of the reviewed experiments has included responsibility frames on the social network level, which is why the effects of these frames are practically unexplored. It would bring more clarity to research on responsibility frames if the social network level were to be given greater consideration.

Effects of Responsibility Frames

Only n = 12 studies have examined the effects of media responsibility frames altogether, so these results should be interpreted with caution. Regarding the effects of responsibility frames, the most consistent evidence was found for policy support. Studies showed that news reports emphasizing societal responsibility for health increased support for health policy measures, while individually framed stories decreased policy support.

Unexpectedly, the effects of responsibility frames on attributions of responsibility were often inconsistent with the assumptions of Iyengar (1991), which might be since some of them confounded different frame dimensions and influence levels (see Shah et al., 2004). Other authors supposed that the individual frame is the norm in Western societies and that the experimental stimuli were not powerful enough to change preexisting causal beliefs (Coleman et al., 2011; Sun et al., 2016). However, the influence of preexisting beliefs can only be speculated about because none of the included experiments explicitly measured them. Quality concerns in some of these studies further complicate identifying a clear direction of the effects of responsibility framing on attributions.

Because n = 11 out of 12 experiments were conducted with U.S.-American samples, we cannot draw conclusions about the effects of responsibility frames in other countries and cultures. Moreover, some studies found interaction effects regarding gender and political attitudes. Both attribution theory (Weiner, 2006) and framing studies (Gross, 2008; Gross & D'Ambrosio, 2004) indicate the importance of emotions in this context, but the role of emotions was examined only in two isolated studies. Therefore, we would like to see future experimental studies in international samples including these variables.

Limitations

Our systematic review has several limitations, most of which are connected to the scope of our literature search. First, it is

possible that the body of evidence we reviewed is not comprehensive. A recent systematic review by Dan and Raupp (2018) found that the number of different frame labels is higher than the actual frames examined. Such "frame inflation" might also be an issue in this context. Though we used synonymous search terms and combined different search strategies, studies that have focused on similar concepts might have used different names and therefore may not have been found by our search.

Moreover, we acknowledge that there are more than three influence levels in social-ecological models, and that these levels interact (Sallis et al., 2015). However, our review has revealed that research on health responsibility framing is often centered around individual vs. societal influences. Since influences from the in-between levels are often neglected, including at least the social network level is an important starting point for adding more nuance to this research field. Future studies may further differentiate responsibility frames at the meso level by looking at the community and organizational levels.

Due to the small number of experiments, the low reliability of the "influence level" variable for the experiments, and their heterogeneous outcome measures, we did not perform a meta-analysis.

Conclusion

In this systematic review, we uncovered a tendency toward individual responsibility framing in the media coverage across various health issues, but also small trends toward more societal responsibility in some contexts. Moreover, we found solid evidence indicating that frames assigning health responsibility to the individual lower the support for health policies. Consequently, a pronounced individualism in media can result in real-life problems for affected individuals because public opinion and health policies are not in their favor. Thus, it is worrying that media framing of health is still so distorted toward individual responsibility. Eventually, responsibility frames not only influence the recipients' opinions and actions – they also reflect and reinforce existing societal norms of health responsibility.

Additionally, we revealed several gaps in the extant literature on health-related responsibility frames. First, the effects of responsibility frames are understudied; in particular, little is known about preexisting beliefs, behavioral outcomes, and emotions. Second, there is a focus on noncommunicable diseases such as obesity and depression while communicable diseases were given far less attention. This lack appears especially critical in the face of the ongoing SARS-CoV-2 pandemic. Third, we uncovered a gap regarding responsibility frames at the social network level. We consider this conceptual focus on individual vs. societal responsibility based on episodic vs. thematic framing problematic because it inhibits a more nuanced understanding of responsibility frames and their effects.

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Supplementary Material

Supplemental data for this article can be accessed on the publisher's website.

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