European Journal of Health Communication

ISSN 2673-5903
ejhc.org

Article

Framing Depression

Individual, Societal, and Social Network Responsibility Attributions in Media Coverage

DOI: 10.47368/ejhc.2022.305
2022, Vol. 3(3) 92-117

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Abstract

Responsibility framing research on health issues typically investigates the attribution of responsibility for causes and treatment options to either the individual or society. However, social epidemiological perspectives also stress the relevance of an individual's social network and underline that the three levels of responsibility (individual, social network, and society) interact. Given that media portrayals can affect public perceptions, attitudes, responsibility attributions, and emotions, we examined causal and treatment responsibility attributions on these three levels in the media coverage of depression. Our quantitative content analysis of major German print and online news media from 2011 to 2020 (N = 755) shows that responsibility is not only assigned to the individual and societal level, but both to the social network and to interactions between the three levels. Our findings additionally stress that key events may influence the portrayal of responsibility in media coverage, but resulting changes are only short-term.

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Keywords
Responsibility frames, media coverage, social epidemiological research, content analysis, depression.

In communication, 'framing' essentially describes a process in which certain aspects of this issue are emphasised, whereas others are left out (Entman, 1993). As result of this process (Matthes, 2014), frames in media coverage give a certain meaning to the information presented (Brüggemann, 2014). 'Responsibility frames' in particular attribute causal and treatment responsibility to either an individual, a group or society at large by stressing specific causes and treatment options (or barriers) for certain issues (Iyengar, 1990; Semetko & Valkenburg, 2000). These responsibility frames are considered generic, i.e., they can be identified in relation to different topics (De Vreese, 2011). Still, they have mainly been examined in the context of health issues (Major & Jankowski, 2020), such as depression (Zhang et al., 2016; Zhang et al., 2021; Zhang & Jin, 2015), diabetes (Gounder & Ameer, 2018; Stefanik-Sidener, 2013) and obesity (S.-H. Kim & Willis, 2007; Nimegeer et al., 2019; S. Sun et al., 2021). Content analyses show that news media predominantly attribute health responsibility to the individual, for example by stressing certain health behaviours, such as smoking, physical activity, diet and a lack of sleep, as cause of illness, and changing these behaviours as a treatment option (e.g., Gounder & Ameer, 2018; S.-H. Kim et al., 2015; S. Sun et al., 2021; Zhang et al., 2014).

However, such individualised attributions of causal and treatment responsibility for health issues can be problematic, as they may have a negative effect on the public perception of these issues (Heley et al., 2020) or lead to negative emotions towards patients (Corrigan, 2000; Weiner, 2006). In addition, focusing on individual responsibilities can lead to a reduced willingness to provide social support to those affected (Y. Sun et al., 2016; Traina et al., 2019) by drawing away attention from external responsibilities (S.-H. Kim et al., 2015). Furthermore, it may increase the (self-)stigmatisation of patients (Vyncke & van Gorp, 2018). Finally, these individualised attributions of responsibility do not do justice to the multiple factors that influence health outcomes, as described by social epidemiological concepts such as social determinants of health (Braveman & Gottlieb, 2014; Commission on Social Determinants of Health, 2005) or socio-ecological models (Golden & Earp, 2012; Moran et al., 2016; Sallis & Owen, 2015).

Both approaches highlight the relevance of determinants of health beyond individual factors. Thus, they locate determinants of health on at least three levels of responsibility – the individual, its social network, and the society. Furthermore, they acknowledge that the different levels interact in their impact on health (Moran et al., 2016; Sallis & Owen, 2015; Stokols, 1996). For instance, a person's health behaviours (individual) are often interlinked with their socio-economic status (society) (DiMatteo, 2004; Short & Mollborn, 2015). Thus, health (and illness) is not only determined by individual, network, and societal factors, but also by interactions between levels of responsibility (Sallis & Owen, 2015; Stokols, 1996).

Previous studies on responsibility frames in the media coverage of health issues mostly address the individual as well as the societal level, thus differentiating between individual and societal responsibilities. However, they mainly lack both the perspective of the social network and the aspect of interactions (Temmann et al., 2022). Our study aims to close this research gap by examining responsibility attributions in media coverage on all three levels of

responsibility as well as depictions of interactions between these levels. Thereby, we integrate social epidemiological perspectives into the concept of responsibility framing.

To address this research gap empirically, we chose to focus on the German media coverage of depression for several reasons. Firstly, the common mental illness affects about 280 million people worldwide and is a major cause of disability. Thus, depression contributes significantly to the overall burden of disease (WHO, 2021) and results in tremendous societal and political challenges. Considering not only these manifold consequences of the disease itself, but also the potential negative effects of individualised attributions of responsibility in media coverage, the question arises as to how causal and treatment responsibility for depression are framed in German media coverage. Secondly, depression is an illness caused by a complex interaction of individual and external risk factors (WHO, 2020), including factors on the level of the social network (Levula et al., 2018; Santini et al., 2015). With regards to treatment options and barriers, the social network and the interactions between different levels of responsibility play a crucial role as well (Goodman et al., 2019; Pfeiffer et al., 2011; Santini et al., 2015). Thus, the media coverage of depression seems to be a suitable example to examine responsibility attributions on three levels – individual, social network, and society – as well as the depictions of interactions between these levels.

Health From a Social Epidemiological Perspective

For decades, the approach to health and illness in Western societies has mainly been characterised by individualism, focusing almost exclusively on individual determinants of health, such as genetics, age, gender, biological determinants or health behaviours (Bircher & Kuruvilla, 2014; Yadavendu, 2001). This is reflected by the media coverage of health issues, where individual responsibility for health is strongly emphasised (S.-H. Kim et al., 2015; Major, 2018; Major & Jankowski, 2020; S. Sun et al., 2021). However, social determinants of health as well as socio-ecological approaches have gained increasing attention in health communication (Major, 2018; Major & Jankowski, 2020; Moran et al., 2016). Those approaches acknowledge the multiple contexts that affect health outcomes, ranging from individual-level to societal-level with the social network as level of responsibility in-between (Braveman & Gottlieb, 2014; Dahlgren & Whitehead, 1991; Sallis & Owen, 2015; Stokols, 1996).

The term ‘social network’ refers to the “web of social relationships that surround individuals” (Heaney & Israel, 2008, p. 190). Social networks can be characterised by their structural aspects, such as formality. Formality refers to the “extent to which social relationships exist in the context of organisational or institutional roles” (Heaney & Israel, 2008, p. 193) and distinguishes a person’s informal (e.g., family, friends) from their formal (e.g., medical providers, co-workers) social network. Social networks can further be characterised by their different functions or qualities, with social support being the most important one (Schwarzer et al., 2003). There is strong evidence linking social networks and social support to health outcomes via (1) psychological (Schwarzer et al., 2003; Uchino et al., 2012), (2) physiological (Kiecolt-Glaser et al., 2010; Uchino, 2006), as well as (3) behavioural mechanisms (DiMatteo, 2004; Gallant, 2013). For instance, social support is closely linked to cognitive and affective states, such as optimism or distress, which can operate as either protective or risk factors for pathophysiological processes as well as recovery processes

(Schwarzer et al., 2003; Uchino et al., 2012). In addition, there is strong evidence linking social support to aspects of cardiovascular function that may lower the risk for disease (Uchino, 2004; Uchino et al., 2012) and finally, it has been shown that social networks can stimulate health behaviours that prevent the onset of illness, slow its progression, or affect the recovery process (DiMatteo, 2004; Miller & DiMatteo, 2013; Schwarzer et al., 2003). However, social support, while by definition intentionally helpful, can also have unintended, negative consequences (e.g., individuals feeling patronised or pressured to living up to the expectations of others; Gallant, 2003). Equally, a lack of social support as well as conflicts or stress within an individual's social network have been shown to negatively affect health outcomes (Goodman et al., 2019; Hendryx et al., 2019; Kivimäki et al., 2015; Reblin & Uchino, 2008).

Social support can be provided by both an individual's informal and more formal social relationships (Heaney & Israel, 2008). While informal relationships mainly describe those to friends and family members, an individual's formal social network consists of relationships embedded in professional or organisational contexts, such as the relationship between patient and doctor or between colleagues. The type of support that people desire and receive varies across these different relationships. For instance, they wish to be offered emotional support by family and friends (i.e., expressions of empathy, love, trust, and caring), while relying on informational support (i.e., advice, suggestions, and information) by doctors and other medical providers (Agneessens et al., 2006; Blanchard et al., 1995; Heaney & Israel, 2008).

Apart from their immediate social surroundings, i.e., their social network, a person's health may also be affected by their physical, socio-economic, policy, and cultural environment (Dahlgren & Whitehead, 1991; Sallis & Owen, 2015), which we summarise as societal level. The socio-economic status in particular is considered to be a decisive societal-level health predictor (Marmot & Allen, 2014). In Germany, people with a low socio-economic status are more often affected by chronic diseases and premature mortality, and also more frequently experience restrictions in health-related quality of life (Lampert et al., 2018).

Still, social epidemiological perspectives not only emphasise the significance of each of the three levels of responsibility – individual, social network, and society. They also stress that different factors on different levels often interact in their impact on health outcomes (Sallis & Owen, 2015; Stokols, 1996). For instance, research has repeatedly shown the correlation between socio-economic status and an individuals' health behaviours such as smoking, physical activity or diet (Marmot & Allen, 2014; Pampel et al., 2010). With regards to social support, evidence suggests that social support depends on different demographic (individual) as well as socio-economic and geographical (societal) factors (Bedaso et al., 2021; Melchiorre et al., 2013).

Overall, social epidemiological approaches both account for the multiple contexts that influence health behaviour and emphasise the interactions between individuals, their social networks and society that underlie health outcomes (Braveman & Gottlieb, 2014; Golden & Earp, 2012; Sallis & Owen, 2015; Stokols, 1996). Thus, they assume that there are several levels of responsibility, which interact and reinforce one another regarding their impact on health, i.e., the different levels are actually intertwined, with individual, social network, and societal factors contributing to health outcomes. This is especially true for depression, which is why we choose this disease for our analysis.

Health Responsibilities in Depression

Depression is a common mental disorder that affects about 280 million people worldwide (WHO, 2020). Most depressive disorders tend to be chronic, with relapses. At its worst, depression can lead to suicide, which is the second leading cause of death in 15–29-year-olds (WHO, 2020).

Causal Responsibility

Depression is caused by a complex interaction of individual and external risk factors (WHO, 2020). On an individual level, certain genetic predispositions (Shadrina et al., 2018), as well as neurobiological determinants (Harvard Health Publishing, 2009) and even specific health behaviours (Hu et al., 2020; J. Ö. Schäfer et al., 2017), might contribute to the risk of depression. On a social network level, individuals who have, for example, lost a family member, are more likely to develop depression (WHO, 2020). This is also true for individuals experiencing conflicts or stress within their social network (e.g., relationship issues, job-related stress; Goodman et al., 2019; Levula et al., 2018; Santini et al., 2015). Moreover, at a societal level, socioeconomic factors (Jeon et al., 2017), social inequalities, poverty and unemployment are often associated with depression (Alegría et al., 2018; Lund et al., 2018; Prins et al., 2015; Ridley et al., 2020).

Treatment Responsibility

With regards to treatment responsibilities, there are, on an individual level, effective treatment options for depression, such as psychotherapy or antidepressant medication (WHO, 2020). Furthermore, physical activity, especially in combination with psychotherapy and medication, is considered to reduce symptoms of depression (Schuch & Stubbs, 2019). On a social network level, the network itself (and especially the support it can offer) is important for managing depression (Gariépy et al., 2016; Pfeiffer et al., 2011). A lack of social support, however, can make it more difficult for patients to deal with their illness (Santini et al., 2015). On a societal level, improving the overall political and socio-economic situation (e.g., by reducing social inequalities), can help to reduce the number of people suffering from depression (Alegría et al., 2018). Moreover, public communication campaigns, e.g., to reduce depression-related stigmata, have been shown to positively impact both awareness of and attitudes towards depression (Gronholm et al., 2017; Hansson et al., 2016), helping to engage patients in psychosocial mental health treatments (Conner et al., 2010). Overall, responsibilities in depression are multifaceted for both causes and treatment options (barriers); with the social network and especially social support playing a significant role. Therefore, it is crucial to look at the social network as a level beyond individual and society. In addition, interactions between the different levels should be considered, as they can reinforce risks and influence treatment outcomes. These complexities in health responsibilities are reflected by social epidemiological perspectives that strongly emphasise (1) the role of the social network and (2) the interactions between the three levels. However, research on the responsibility framing of health issues – with depression being no exception – has, so far, mainly neglected both aspects (Temmann et al., 2022).

Responsibility Framing of Health Issues in the Media

Framing is the process of selecting aspects of a perceived reality and making them more salient in communication, in such a way as to promote a specific interpretation of the information presented (Brüggemann, 2014; Entman, 1993, p. 52). Frames attributing causal and/or treatment responsibility by stressing certain causes and/or treatment options respectively barriers, i.e., responsibility frames (Iyengar, 1990; Semetko & Valkenburg, 2000), can affect the public perception of health issues (Heley et al., 2020; McGlynn & McGlone, 2018; Niederdeppe et al., 2011), as well as recipient's attributions of responsibility (Starr & Oxlad, 2021; Temmann et al., 2020) and emotions towards those affected by these health issues (Corrigan, 2000; Weiner, 2006). Furthermore, responsibility frames can influence intentions for individual health behaviour, interpersonal behaviour, and societal participation (Y. Sun et al., 2016).

Despite the implications of social epidemiological approaches to health, the majority of studies on responsibility frames in the media coverage of health issues exclusively addresses individual and societal responsibilities (Temmann et al., 2022).

Emphasis on Individual Responsibility

Media coverage of a variety of health issues, including obesity (e.g., Nimegeer et al., 2019; S. Sun et al., 2021), diabetes mellitus (e.g., Gounder & Ameer, 2018; Stefanik-Sidener, 2013), physical activity (Bonfiglioli et al., 2011), cancer and heart disease (Clarke & van Amerom, 2008; Y.-C. Kim et al., 2017), rising health care costs (S.-H. Kim et al., 2015; S.-H. Kim et al., 2017) as well as sexual health (S. P. Martin et al., 2014), primarily emphasises individual rather than societal causal and treatment responsibility. In particular, news media point out the role of health behaviours for health outcomes. Still, there are some exceptions, specifically the media portrayal of excess sugar consumption (Buckton et al., 2018), risks of solaria (MacKenzie et al., 2008) and, finally, trans fat consumption (Jarlenski & Barry, 2013). In the context of these health issues, the media focus on societal causal and treatment responsibilities, rather than individual ones.

Role of Depictions of Social Network Responsibilities and Interactions Between Levels of Responsibility Remains Unclear

While previous research on responsibility frames in the media coverage of health issues mostly examines individual and societal responsibilities, very few content analyses in this context have addressed the social network as a level of responsibility (Temmann et al., 2022). When addressed at all, responsibility frames at the social network level were mostly analysed implicitly, i.e., conflated with either the individual (e.g., Gollust & Lantz, 2009) or the societal level (e.g., Zhang et al., 2016). Only a small part of content analyses of media coverage on health issues explicitly addressed the social network as level of responsibility (Bie & Tang, 2015; Brún et al., 2013; Wise & Cullerton, 2021). However, while examining attributions of responsibility at the social network level, these studies do not provide clear results with regards to individual and societal causal and treatment responsibilities. Therefore, the ability to draw conclusions regarding the role of the social network in the portrayal of responsibility for health issues in media coverage is severely limited. Finally, the interactions between different levels of responsibility have not been considered by previous studies at all (Temmann et al., 2022).

Attributions of Responsibility for Depression in Media Coverage: Cultural Specifics and Changes over Time

Regarding depression, attributions of responsibility in media coverage have been shown to vary a great amount over time and depending from the cultural context. According to Zhang et al. (2014), Chinese newspapers mostly assign treatment responsibilities (but not causal responsibilities) to the societal, rather than the individual level, whereas the US media mainly place causal responsibilities and treatment responsibilities for depression on the individual (Zhang et al., 2016).[1] Nevertheless, attributions of treatment responsibility in US media coverage on depression have, over time, increasingly shifted towards society (Zhang et al., 2016). The social network and the interactions between the different levels of responsibility, however, have not been addressed (directly) by previous research on responsibility frames in the media coverage of depression. Overall, we can draw several conclusions from current research on responsibility frames in media coverage of health issues in general and depression in particular: (1) contrary to implications of social epidemiological concepts and medical evidence, the social network has scarcely been addressed as a level of responsibility in studies on responsibility attributions in media coverage, (2) existing studies do not provide detailed information on the role of the social network among responsibility attributions, (3) the interactions between individuals, their social networks and society that underlie health outcomes as described by social epidemiological concepts (Golden & Earp, 2012; Marmot & Allen, 2014; Sallis & Owen, 2015; Stokols, 1996) have not been considered in content analyses of responsibility frames, and (4) the media portrayal of responsibility for depression seems to be context- and time-dependent.

Research Questions

Based on the current state of research, it remains unclear to what extent social network responsibilities, in comparison to individual and societal responsibilities, are addressed in the media coverage of health issues. Given the importance of social networks and especially social support for health outcomes, as described by social epidemiological approaches (Gallant, 2003; Sallis & Owen, 2015; Stokols, 1996), it appears crucial to close this research gap. As the social network plays a significant role in causing and treating depression (Gariépy et al., 2016; Levula et al., 2018; Pfeiffer et al., 2011; Santini et al., 2015), we chose to focus on the German media coverage of the common mental illness. Therefore, we ask the following research questions regarding the portrayal of individual, social network, and societal responsibility for depression:

> *RQ1:* To what extent does the media coverage attribute individual, social network and societal responsibility for depression?
>
> *RQ2:* What are the most common causes of depression as depicted in media coverage?
>
> *RQ3:* What are the most common treatment options and barriers for depression as depicted in media coverage?

Given the interactions between the different levels of responsibility that social epidemiological approaches suggest (Moran et al., 2016; Sallis & Owen, 2015; Stokols, 1996), such as a person's health behaviours (individual) often being interlinked with their family or work context (social network) and/or their socio-economic status (society) (DiMatteo, 2004; Short & Mollborn, 2015), RQ4 addresses interaction frames in the media coverage:

RQ4: To what extent does the media coverage attribute responsibility for depression to interactions between the different levels?

While previous research on the portrayal of responsibility for depression in media coverage has addressed neither the social network nor interactions between the different levels, it has shown that attributions of responsibility in media coverage can change over time (Zhang et al., 2014; Zhang et al., 2016), which leads to our final research question:

RQ5: How has the attribution of responsibility for depression in media coverage changed over the years?

Materials and Methods

Sample

To answer these questions, we conducted a quantitative content analysis of the news media coverage of depression in Germany from 2011 to 2020. In our sample, we included Germany's major national newspaper and news magazines (Bild, Frankfurter Allgemeine Zeitung, Focus, Süddeutsche Zeitung, Der Spiegel, taz, die Tageszeitung, Die Welt and Die Zeit) as well as major German online news media (Bild.de, faz.net, sueddeutsche.de, SPIEGEL Online, taz.de, welt.de and ZEIT ONLINE; MEEDIA, 2019; Schröder, 2020). We chose to analyse these media for various reasons. Firstly, the national newspaper and news magazines in Germany are widely regarded as opinion-leading media (Beck, 2018) and thus may especially affect the public perception of depression as well as recipient's responsibility attributions. Moreover, journalists tend to align their reporting with the way issues are framed by the opinion-leading media (B. Scheufele, 2003). Therefore, the press coverage in national print media can be considered as an indicator for general tendencies in the coverage of depression in Germany (M. Schäfer, 2018). However, in recent years, online news media have become more and more relevant for audiences (Mangold et al., 2017), so we chose to include these in our analysis, too. We employed keyword searches (*depress*) in multiple databases (Nexis Uni, APA Online Manager, FAZ Archiv, SZ Archiv) and then, according to our inclusion criteria, we excluded (1) all items not or only marginally related to depression (S. Sun et al., 2021; Zhang & Jin, 2015), (2) duplicated items, and (3) non-editorial items, such as ads. Our final sample included $N = 755$ articles (print $n = 370$, online $n = 385$) that referred to depression or related topics (e.g., symptoms, medication) as their main object of interest.

Coding

Table 1 shows the coding instrument, which specifies what might constitute a potential cause or treatment option (barrier) for depression as well as reliability measures for all variables. To make sure the frames could be properly distinguished from one another in the coding, each frame was explained elaborately and illustrated by several examples in the coding manual. In general, coders were asked to code the level of the individual, when the responsibility for depression was attributed to the patients themselves. The level of the social network was to be coded when responsibility was assigned in the context of social relationships, may they be informal (e.g., family) or more formal (e.g., doctors, co-workers). Finally, the level of the society applied when responsibilities were addressed on a structural level, apart from individuals or their web of social relationships. For instance, stigmatisation was coded as a

social-network level issue if the article made clear that patients were stigmatised by a person they knew or had any sort of social relationship to. The mentioning of stigmatisation as general problem in the context of depression, however, was coded as societal-level treatment barrier.

Attributions of causal responsibility were then coded as either (1) *individual*, (2) *informal social network*, (3) *formal social network*, (4) *societal*, or (5) *interaction causes*. Individual causes included biological and medical factors, genetics, demographics, behavioural or lifestyle factors and individual traumatic events or developments. Causes attributed to the social network were divided into causes within the informal social network (interpersonal relationship problems, traumatic events or developments) and causes within the formal social network (job-related stress, conflicts, mobbing). Societal causes included general working conditions, general societal structures/developments, and socio-economic factors. Finally, an interaction frame attributing causal responsibility for depression was coded, e.g., if the media pointed out that the illness is caused by a complex interaction of individual and external risk factors (WHO, 2020). For instance, people with a genetic predisposition (Shadrina et al., 2018) are more likely to develop depression when experiencing loss, conflicts or stress within their social network (Goodman et al., 2019; Levula et al., 2018; Santini et al., 2015; WHO, 2020).

Attributions of treatment responsibility included, next to remedies and treatment options, also issues that might prevent an actual solution (Iyengar, 1990; Semetko & Valkenburg, 2000) and were categorised into (6) *individual*, (7) *informal social network*, (8) *formal social network*, (9) *societal*, and (10) *interaction treatment options barriers*. Individual treatment options or barriers contain behavioural or lifestyle changes (e.g., physical activity, sleep) and medication or therapy. Treatment options or barriers attributed to the social network were divided into those within the informal social network (social support with positive consequences, social support with negative consequences, lack of social support, and stigmatisation) and those within the formal social network (social support with positive consequences, social support with negative consequences, lack of social support, and stigmatisation). Societal treatment options or barriers included stigmatisation, de-stigmatisation, growth of knowledge, as well as lack of knowledge, public health care or the lack of public health care. An interaction frame attributing treatment responsibility for depression was coded, e.g., if the media pointed out that antidepressants and psychotherapy work better when a patient feels supported by family and friends. In this case, individual-level and social network level interact as treatment options. The entire text of each article was examined regarding attributions of responsibility (S.-H. Kim & Willis, 2007). The coding for each frame was not exclusive. Therefore, an article might reference all possible frames (Stefanik-Sidener, 2013). Each frame was treated as a binary variable, so every possible cause or treatment option (respectively barrier) was coded as either *present* (1) or *absent* (0; Gollust & Lantz, 2009). The codebook included a list of causes and treatment options (barriers). Individual and societal causes and treatment options (barriers) were partially drawn from content analyses by Zhang, Jin, Stewart and Porter (2016), Stefanik-Sidener (2013) as well as S.-H. Kim and Willis (2007). The social network and interaction frames were based primarily on the literature on social support and social epidemiological approaches (Golden & Earp, 2012; Heaney & Israel, 2008; Holt-Lunstad & Uchino, 2015). Following in-depth training, in which researchers and coders applied the coding scheme together and discussed further development and specification of the different variables, as well as two rounds of pretesting, five student coders coded the articles in the sample.

Table 1. Media Attributions of Causal and Treatment Responsibility (Variables, Examples and Intercoder Reliability)

Causal Responsibility	Treatment Responsibility
Individual causes (rα ≥ .87)	Individual treatment options/ barriers (rα ≥ .94)
Biological and medical factors *"According to researchers, a lack of serotonin may lead to depression."*	Individual behavioural/ lifestyle changes *"Changing your lifestyle can have a big effect on your mood."*
Genetics *"People with a family history of depression are more likely to develop depression themselves."*	Medication and Therapy *"Antidepressants have demonstrated efficacy for depression."*
Demographics *"Depression occurs more often in women than men."*	
Individual behavioural/ lifestyle factors *"People with a stressful lifestyle or, compared to others, more in risk of developing depression."*	
Individual traumatic events *"People going through trauma are more likely to develop depression."*	
Informal social network causes (rα ≥ .75)	Informal social network treatment options/ barriers (rα ≥ .68)
Interpersonal relationship problems *"Conflicts within family have been found to be an important predictor of depression."*	Social support (positive consequences) *"Remember that your loved one's depression isn't anyone's fault. You can't fix the person's depression — but your support and understanding can help."*
Traumatic events within the informal social network *"People who have gone through bereavement are more likely to develop depression."*	Social support (negative consequences) *"My friends tried to help me, but in such a way that I only felt more pressure to not be ill anymore, which of course was not helpful at all."*
	Lack of social support *"As she felt her family leaving her alone with the illness, the depression grew worse and worse."*
	Stigmatisation within the informal social network *"Stigma and prejudice against people with depression is still very much a problem and even more so, if it occurs within the family."*

Table 1. Media Attributions of Causal and Treatment Responsibility (Variables, Examples and Intercoder Reliability) [continued]

Formal social network causes (rα ≥ .87)	Formal social network treatment options/ barriers (rα ≥ .76)
Job-related stress *"Constant work-related stress may lead to burnout or even depression."*	Social support (positive consequences) *"A positive and supportive work environment can help patients in their recovery from depression."*
Conflicts/ Bullying *"Children suffering from bullying in school are more likely to develop depression."*	Social support (negative consequences) *"My colleagues tried to help me by taking on several of the tasks that I was supposed to work on. But this only made me feel more depressed."*
	Lack of social support *"I lost my job when my boss found out about my illness. That, of course, made the situation even worse."*
	Stigmatisation within the formal social network *"Stigma and prejudice against people with depression is still very much a problem in most work places."*
Societal causes (rα ≥ .83)	Societal treatment options/ barriers (rα ≥ .78)
General working conditions *"Due to occupational stressors, depression occurs especially often among physicians and nurses in hospitals."*	(De-)Stigmatisation within the society *"Reducing the societal stigma is of great importance in the fight against depression."*
General societal structures/ developments *"With the rise of the COVID-19 pandemic, we've seen more and more people suffering from mental health problems, including anxiety and depression."*	Lack of knowledge *"While we know more and more about depression, there are still people suffering from the illness who do not benefit from any form of therapy at all, and the reasons are still unclear."*
Socio-economic factors *"Poverty may increase the risk of depression."*	Growth of knowledge *"Pharmacists have introduced new, promising antidepressants."*
	(Lack of) Public health care *"Therapy needs to be accessible for everyone. As long as it is not, people will suffer."*
Interactions between levels of responsibility (rα = .95)	Interactions between levels of responsibility (rα = .81)
"Depression results from a complex interaction of biological and social factors."	*"Often, people suffering from depression avoid seeking treatment since they are afraid to be treated differently by family, friends or colleagues. That's because stigma as well as discrimination against people with depression or other mental illnesses is still very much a problem in our society."*

To assess the reliability of the coding scheme across the five student coders, we compared the codings for $n = 60$ randomly selected articles, each coded by two randomly selected coders. We then computed Krippendorff's Alpha, a measure of intercoder reliability (Krippendorff, 2011), using the online reliability calculating tool by Freelon (2017). Reliabilities for variables ranged from $\alpha = .68$ to $\alpha = .95$ (see Krippendorff's Alpha for each variable in Table 1). To further guarantee intercoder reliability, researchers and coders met regularly throughout the coding process and discussed articles that were difficult to code.

Results

Individual, Social Network, and Societal Responsibilities for Depression (RQ1)

The majority of the articles in our sample contain responsibility frames, with 54.4% of all articles ($n = 411$) attributing causal responsibility for depression and 86.4% of all articles ($n = 652$) attributing treatment responsibility.

In line with previous research, our results show that the German media coverage mainly attributes causal responsibility for depression to the individual, with 76.2% ($n = 313$) of all articles assigning causal responsibility pointing out individual causes. However, 62.0% ($n = 255$) of these articles also discuss causes of depression rooted in the social network, especially the formal social network ($n = 182$). Finally, societal causes are depicted in 32.6 % ($n = 134$) of all articles assigning causal responsibility for depression (Table 2).

The majority of articles attributing treatment responsibility for depression, specifically 83.3% ($n = 543$), depict individual treatment options and barriers. 46.8 % of these articles ($n = 305$) assign treatment options and barriers to the social network. Again, attributions of responsibility to the formal social network ($n = 230$) outweigh those to the informal social network ($n = 156$). Societal treatment options and barriers are discussed in 69.5% ($n = 453$) of the articles assigning treatment responsibility (Table 2).

Table 2. Individual, Social Network, and Societal Responsibility Attributions as well as Depictions of Interactions between Levels of Responsibility in German Depression Coverage

Level of Responsibility	Causal Responsibility ($n = 411$)		Treatment Responsibility ($n = 652$)	
	n	*% of Articles Attributing Causal Responsibility*	*n*	*% of Articles Attributing Treatment Responsibility*
Individual	313	76.2	543	83.3
Social Network	255	62.0	305	46.8
Informal	142	34.6	156	23.9
Formal	182	44.3	230	35.3
Society	134	32.6	453	69.5
Interactions	173	42.1	164	25.2

Note. N = 755 articles in German print and online media between 2011 and 2020. Multiple codings of responsibility attributions per article possible.

Most Commonly Depicted Causes and Treatment Options respectively Barriers (RQ2 and RQ3)

Although the German print and online coverage attributes causal responsibility for depression mainly to the individual, the most commonly depicted single cause of the illness, (1) job-related stress (n = 161), is located at the social network level. It is followed by (2) individual traumatic events or developments (n = 105), (3) biological and medical factors (n = 96) and (4) genetics (n = 87) as individual-level causes, and, finally, (5) general working conditions as a societal-level cause (n = 86).

With regards to treatment responsibility, the depression coverage most frequently depicts (1) medication and therapy (n = 457) as an individual treatment option, followed by (2) stigmatisation (n = 185) as a societal-level treatment barrier, (3) social support with positive consequences offered by the formal social network (n = 177) as a treatment option within the social network, (4) de-stigmatisation (n = 175) as societal-level treatment option and, finally, (5) behavioural or lifestyle changes (n = 143) as another individual-level treatment option.

Interactions Between Levels of Responsibility (RQ4)

Our results show that, in addition to attributing responsibility to more than just two levels of responsibility, the media also consider that these different levels interact with regards to causes and treatment of depression. In particular, 42.1% (n = 173) of all articles attributing causal responsibility for depression discuss these interactions, e.g., by pointing out that the combination of a genetic predisposition and certain external risk factors may offset depression. Furthermore, treatment options and barriers are assigned to an interaction between levels in 25.2% (n = 164) of all articles attributing treatment responsibility (Table 2).

Changes over Time (RQ5)

Regarding the development of responsibility attributions over time, our study shows mixed results. While the focus of the depression coverage remains on individual causal responsibility year after year (Figure 1), in 2014 and 2019 the media addressed societal treatment responsibilities more frequently than individual treatment responsibilities (Figure 2). These developments are due to two specific events: In 2009, Robert Enke, and in 2014, Andreas Biermann, both professional German soccer players, committed suicide. In consequence, there was increased reporting on the working conditions in professional sports as treatment barriers for depression in 2014 as well as in 2019, on the occasion of the 10th anniversary of the death of Robert Enke. Apart from these exceptions, however, responsibility attributions did *not* shift towards the social network, the society or interactions between these levels over time – the media's focus remained on individual responsibilities.

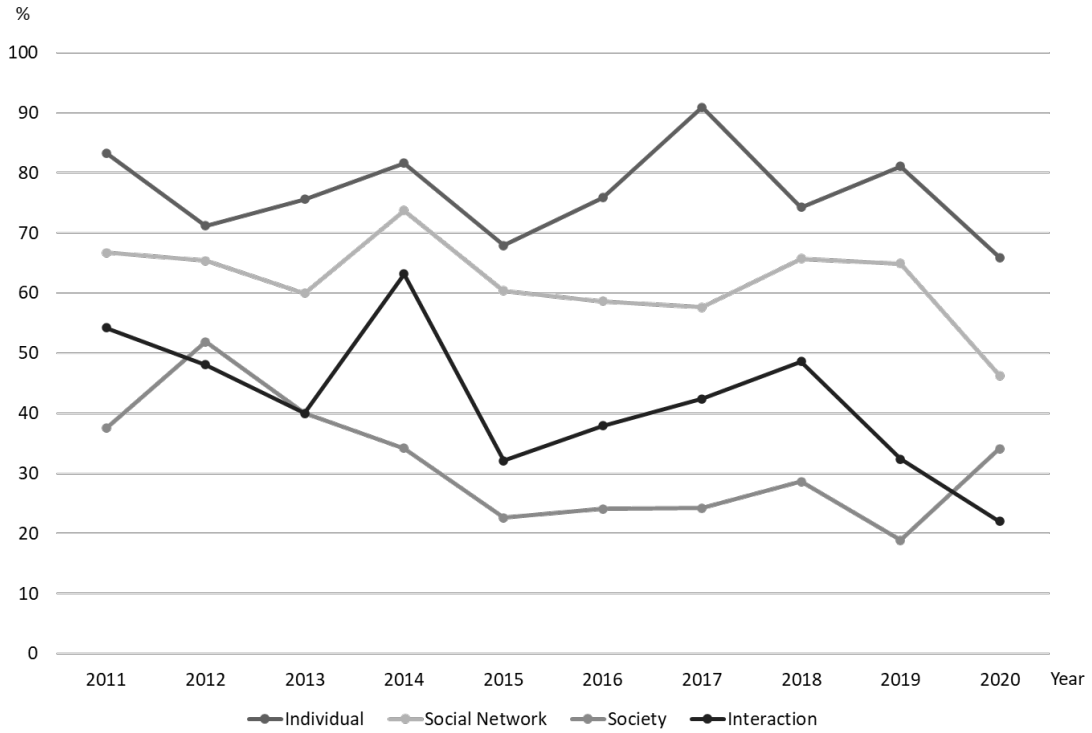

Figure 1. Attributions of Causal Responsibility in Depression Coverage over Time
Note. n = 411. Percentages refer to number of articles attributing causal responsibility for depression per year.

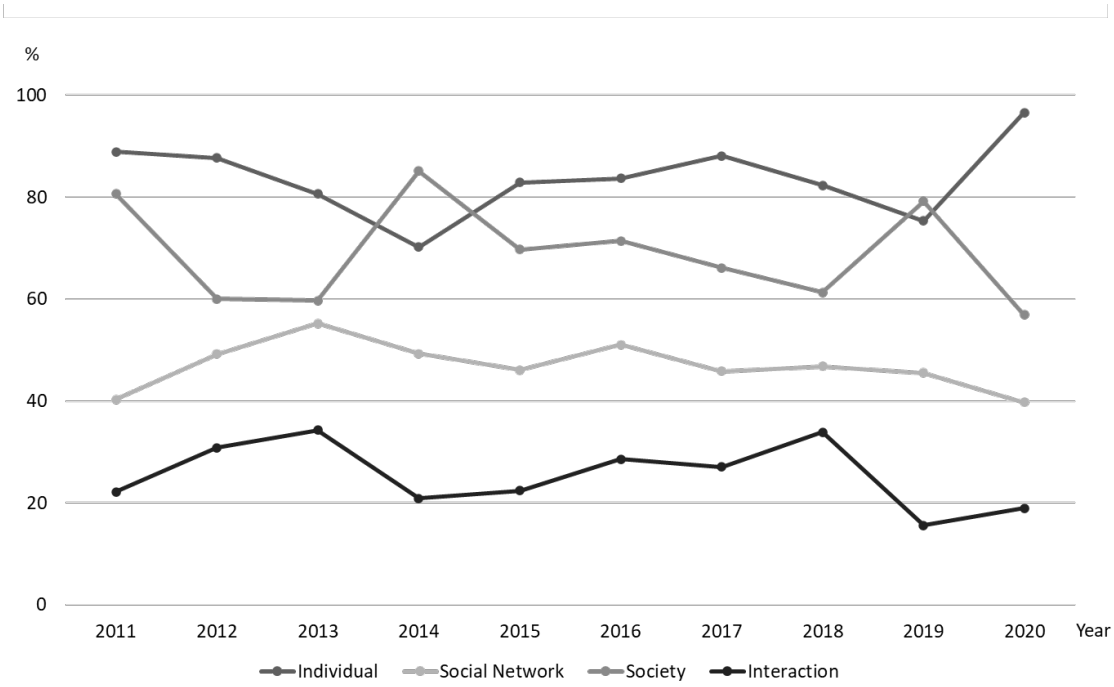

Figure 2. Attributions of Treatment Responsibility in Depression Coverage over Time
Note. n = 652. Percentages refer to number of articles attributing treatment responsibility for depression per year.

Discussion

Responsibility frames (Iyengar, 1990; Semetko & Valkenburg, 2000) in the media coverage of health issues can not only affect the public perception of these issues (Heley et al., 2020; McGlynn & McGlone, 2018; Niederdeppe et al., 2011), but also attributions of responsibility (Gollust et al., 2013; Starr & Oxlad, 2021; Temmann et al., 2020) as well as recipient's emotions (Corrigan, 2000; Weiner, 2006), and, finally, intentions for individual health behaviour, interpersonal behaviour, and societal participation (Y. Sun et al., 2016). Thus, it does not seem surprising that responsibility frames have been examined by communication scholars in various health contexts (Major & Jankowski, 2020).

What does seem surprising, however, is that, so far, studies on responsibility frames in media coverage of health issues have mainly differentiated between individual and societal responsibilities (Temmann et al., 2022). Thus, they scarcely acknowledge the relevance of the social network and the interactions between the different levels of responsibility as described by social epidemiological approaches to health (Bircher & Kuruvilla, 2014; Sallis & Owen, 2015; Stokols, 1996). In our study, we chose to integrate these perspectives into the concept of responsibility framing. In consequence, we examined responsibility attributions for depression in media coverage on three, not just two, levels of responsibility (individual, social network, society). Moreover, we analysed depictions of interactions between these levels. Our results emphasise the importance of both the social network as a level of responsibility and the interactions between the different levels in the responsibility framing of health issues.

In line with existing results from other countries (Zhang et al., 2014; Zhang et al., 2016; Zhang & Jin, 2015) and other health issues (e.g., S.-H. Kim & Willis, 2007; S. P. Martin et al., 2014; Stefanik-Sidener, 2013), our study indicates that German media coverage mainly emphasises individual causal and treatment responsibility for depression, with individual-level responsibility attributions outweighing societal-level attributions. These results are in line with impressions from the US (Zhang et al., 2016), but not with those from Chinese media (Zhang et al., 2014), where societal-level treatment options for depressions were more frequently mentioned than those assigned to the individual. However, there are exceptions from this rule, as two key events have led the media to focus on societal, rather than individual treatment responsibilities in their depression coverage. Still, these changes in the portrayal of responsibility have been short-term. Nevertheless, it seems worth noticing that, in general, the media assign treatment options and barriers quite often to the societal level, while seldomly depicting societal causes of depression.

One of the main goals of our study was to explore to what extent the media attribute causal and treatment responsibility for depression to the social network. While previous studies have mostly examined individual and societal responsibilities in the media coverage of health issues, our data show that the social network is also an important factor. This is in line not only with social epidemiological perspectives (Golden & Earp, 2012; Heaney & Israel, 2008; Marmot & Allen, 2014; Sallis & Owen, 2015; Stokols, 1996), but also medical evidence regarding the causes and treatment options for depression (Gariépy et al., 2016; Goodman et al., 2019; Jeon et al., 2017; Levula et al., 2018; Santini et al., 2015; WHO, 2020).

Our results especially indicate the relevance of the social network (and mainly the formal social network) in the portrayal of *causal* responsibility. Firstly, the media address social network-level causes of depression nearly twice as often as societal-level causes. Secondly, job-related stress as a cause rooted within the social network is the most frequently depicted

cause of depression in media coverage. As for treatment responsibility, the media coverage of depression may not address the level of the social network as often as individual or societal responsibilities, but social support with positive consequences offered by the formal social network, such as helpful advice given by doctors, is still one of the most frequently mentioned treatment options.

The second goal of our study was to examine whether the German media coverage of depression, in line with social epidemiological perspectives on health (Golden & Earp, 2012; Sallis & Owen, 2015; Stokols, 1996), considers the interactions between the different levels of responsibility and their impact on health outcomes. So far, content analyses of responsibility frames in the media coverage of health issues lack this perspective. However, our data point out the significance of these interaction frames, indicating that the media actually cover the complexities of health issues and consider the way in which individuals and their environment are intertwined when it comes to health.

Limitations

Our study has several limitations. First, the total sample is limited to print and online media. However, in recent years, social media in particular have not only changed the way in which people receive and engage with health information (Goodyear et al., 2019; Heiss & Rudolph, 2022; Moorhead et al., 2013), but also increasingly affected the public perception of and attitudes towards health issues (Albalawi & Sixsmith, 2017; Heiss & Rudolph, 2022; Seltzer et al., 2017; Starr & Oxlad, 2021). Still, there is only a limited number of studies examining how responsibility for health issues is portrayed on social media platforms (e.g., Yoo & Kim, 2012; Zhang et al., 2021). Therefore, future research should further explore the responsibility framing of health issues on platforms such as YouTube or Instagram. This way, not only professional journalistic portrayals of responsibility, but different perspectives, could be compared.

Moreover, we only focused on one specific health issue, namely depression. The illness is not only caused by a complex interaction of individual and external risk factors (including those rooted within the social network), but both social network and the interactions between different levels of responsibility affect treatment outcomes as well (Goodman et al., 2019; Pfeiffer et al., 2011; Santini et al., 2015). However, previous research has shown that responsibility attributions in media coverage differ, depending on the topic discussed (Temmann et al., 2022). Therefore, future studies should address other health and societal issues (e.g., climate change) to better understand how the social network and interactions between all three levels of responsibility are portrayed in the media.

While this study explored the frames in the media coverage, additional research should explore the factors – apart from key events – that might impact the frame building process, like journalistic routines, institutional characteristics or actor frames (Boesman et al., 2016; Brüggemann, 2014; Dekavalla, 2018), e.g., through newsroom observations or interviews with journalists. This would enable a better understanding of the construction of frames in the media coverage of health issues (Major & Jankowski, 2020). As media frames cannot only affect how the public thinks about an issue, but they may also reflect the public opinion about certain issues, such as responsibilities for health and illness (i.e., frames in rooted in culture; Entman, 1993), more research should address the public opinion on this matter, e.g., through surveys.

Considering that responsibility frames can affect the public perception of health issues, attributions of responsibility and emotions (Heley et al., 2020; McGlynn & McGlone, 2018; Niederdeppe et al., 2011; Starr & Oxlad, 2021; Vyncke & van Gorp, 2018) as well as influence intentions for individual health behaviour, interpersonal behaviour, and societal participation (Gollust et al., 2013; Y. Sun et al., 2016), future studies should further examine the linguistic specifics of the different frames as well as their respective persuasive effects.

Conclusions

Our results show that integrating social epidemiological perspectives into the concept of responsibility framing does not only make sense from a theoretical point of view. It also enables a more accurate understanding of the portrayal of responsibility in the media coverage of health issues. Consequently, research should continue to include the social network as level of responsibility, as well as look more in-depth into the interactions between individuals and their environment when examining responsibility frames in media coverage. This is especially true for the media coverage of chronic diseases (e.g., diabetes, strokes or heart diseases), given the social network and the interaction of a wide variety of health determinants play a crucial role in the development, prevention and management of these issues (de Ridder & Schreurs, 1996).

Furthermore, responsibility frames are considered to be generic frames (De Vreese et al., 2001). In consequence, the extension of the responsibility framing concept may also proof useful beyond the health context. For instance, issues such as social inequality, climate change or species extinction are also multifactorial as well as subject to social influences (Brake & Büchner, 2012; Mann, 2021).

Our results indicate that causal and treatment responsibilities in depression are attributed to all three levels of responsibility, as well as interactions between these levels. However, the ongoing emphasis on individual responsibility neither does justice to the extent of causes connected to the social network and the societal level, nor to the significance of social support and societal interventions for the treatment of the common mental illness. With regards to the process of frame building (Matthes, 2014; D. A. Scheufele, 1999) and, therefore, the possible impact of responsibility frames on the public perception of the issue in question (Heley et al., 2020; S.-H. Kim & Willis, 2007), health journalists as well as political and societal institutions should critically assess the way they frame health responsibility (Timpel et al., 2019). This is especially true with regards to the portrayal of societal causes, which only make up a rather small part of the media portrayal of depression. We thus suggest to both, health journalists and institutions, to consider the variety of health determinants, instead of overemphasising individual determinants to provide information about a broader variety of prevention and treatment options.

Notes

1. In yet another study, the authors explain this difference with the more individualistic character of the US American society compared to the more collectivistic orientation of the Chinese society (Zhang & Jin, 2015).

Acknowledgements

No ethical approval was obtained, since we analysed information freely available in the public domain and intended for a mass audience. In order to protect student coders from potential harm, we chose to work exclusively with health communication master students who were familiar with the topic of the analysis and closely supervised them throughout the coding process.

Funding

This work was supported by the German Research Foundation (DFG) under Grant 4048819799.

Conflict of Interest

We confirm that no known conflicts of interest exist for this publication. The DFG was not involved in any of the steps within the research process. There has been no financial support that could have influenced the outcome.

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