



OPEN ACCESS

EDITED BY

Xiaodong Sun,
Shandong Second Medical University,
China

REVIEWED BY

Junli Zhu,
Capital Medical University, China
Arne H. Krumsvik,
Markedhøgskolen, Norway

*CORRESPONDENCE

Fumikazu Asai
✉ fumikazu.asai@gmail.com

RECEIVED 11 July 2024

REVISED 08 March 2026

ACCEPTED 09 April 2026

PUBLISHED 01 May 2026

CITATION

Asai F, Okuhara T, Furukawa E, Okada H
and Kiuchi T (2026) Responsibility frame
for depression in Japanese newspapers:
a content analysis.

Front. Commun. 11:1463443.

doi: 10.3389/fcomm.2026.1463443

COPYRIGHT

© 2026 Asai, Okuhara, Furukawa, Okada
and Kiuchi. This is an open-access article
distributed under the terms of the
[Creative Commons Attribution License
\(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or
reproduction in other forums is
permitted, provided the original author(s)
and the copyright owner(s) are credited
and that the original publication in this
journal is cited, in accordance with
accepted academic practice. No use,
distribution or reproduction is permitted
which does not comply with these
terms.

Responsibility frame for depression in Japanese newspapers: a content analysis

Fumikazu Asai^{1*}, Tsuyoshi Okuhara², Emi Furukawa³,
Hiroko Okada² and Takahiro Kiuchi²

¹Department of Health Communication, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, ²Department of Health Communication, School of Public Health, The University of Tokyo, Tokyo, Japan, ³University Hospital Medical Information Network Center, The University of Tokyo Hospital, Tokyo, Japan

Using quantitative content analysis, we explored how Japanese newspapers framed causal and solution responsibility for depression and whether they attributed more responsibility to individuals or society. The longitudinal changes in framing were also examined. Articles referring to depression were selected from the Yomiuri Shimbun, the Asahi Shimbun, and the Mainichi Shimbun, which are nationwide daily newspapers published in Japan between 1993 and 2022. A sample of 980 articles was included in the study. Causal and solution responsibilities were manually coded according to whether they were mentioned at the individual or societal levels. We found that articles attributing causal responsibility to society (62%) outnumbered those attributing it to individuals (24%), driven overwhelmingly by attributions to the workplace (43%). Conversely, solution responsibility remained largely individualized (63%), focusing on medicalized subcategory of personality and health condition changes (54%). In terms of longitudinal change, the proportion of articles attributing solution responsibility to society increased in the second decade of the study compared with the first decade, reflecting key societal and legislative milestones. Although previous studies on responsibility frames in the medical health field have often noted a tendency to attribute causal responsibility to individuals rather than to society, we found that Japan was characterized by a large proportion of articles attributing causal responsibility for depression to society.

KEYWORDS

content analysis, depression, health communication, Japan, newspapers, responsibility frame

1 Introduction

Depression is a leading cause of disability worldwide with a lifetime prevalence of 14.6% in high-income countries and 11.1% in low- and middle-income countries, making it an important public health concern (Bromet et al., 2011). It is the second most common mental disorder after alcohol dependence, with a lifetime prevalence of 5.7% according to epidemiological studies conducted in Japan (Ishikawa et al., 2018).

Risk factors include insomnia (Li et al., 2016), inactivity (Mammen and Faulkner, 2013), and heavy drinking (Rodgers et al., 2000). An epidemiological study of the general Japanese adult population also found significant associations between four health habits and depression: insufficient sleep, a poorly balanced diet, snacking between meals, and lack of exercise (Furihata et al., 2018). Within the context of media

studies, these behavioral factors are of relevance as they serve as the primary message components that news media utilize to construct individual responsibility frames.

News media do not merely report on depression as a public health threat; they play a pivotal role in shaping public perception and social policy by defining where responsibility lies. When responsibility frames lean heavily toward individual choices or traits, they tend to reinforce social stigma and lower support for public interventions or structural reforms. Conversely, frames that attribute causes and solutions to societal environments or structures can justify policy-based remedies and foster an environment where individuals feel empowered to seek help (Temmann et al., 2021). As depression remains a leading cause of the global burden of disease (Hay et al., 2025) and issues like “*Karoshi*” (death from overwork) and mental health literacy become urgent challenges in Japan (Yukawa et al., 2024), analyzing how Japanese news media attribute responsibility provides an essential foundation for understanding how Japanese societal norms are reflected and reinforced, and how these portrayals may ultimately influence public health policy and the social acceptance of affected individuals.

News media inform and influence people about different aspects of health issues. Framing, in which the media selects and highlights certain aspects of an issue, is generally defined as “To frame is to select some aspects of a perceived reality and make them more salient in a communicating text” (Entman, 1993) and functions to determine, diagnose, judge, and suggest remedies to problems. Media framing of health problems is a function of the media. Media framing can influence people’s perceptions of the causes of and solutions to health problems. Research on framing in health communication has increased over the years (Guenther et al., 2021).

Frames that assign responsibility for causing and/or treating health issues to different levels of influence, such as individuals or society, are defined as responsibility frames (Iyengar, 1991; Semetko and Valkenburg, 2000). Individualistic cultures attribute responsibility to individuals (Kim and Willis, 2007), whereas in some cases, the media attributes responsibility to specific industries or governments (Buckton et al., 2018; Jarlenski and Barry, 2013). Through the media responsibility attribution process, responsibility frames can influence people’s beliefs and policy opinions (Iyengar, 1996).

Responsibility frames are defined as communication packages that assign accountability for causing and/or treating health issues to different levels of influence, such as the individual, social networks, or society at large (Temmann et al., 2021). This study conceptualizes responsibility across two distinct dimensions: causal and solution responsibility.

The first dimension, causal responsibility, refers to attributions regarding the source or origin of a social problem—specifically, who or what is perceived to have produced the issue. The second dimension, solution responsibility (or problem-solving responsibility), identifies who is accountable for addressing, fixing, or treating the problem, including the obligation to implement remedies or remove barriers to effective solutions.

Furthermore, these responsibilities are categorized based on whether the locus of accountability is situated at the individual or societal level. Individual responsibility focuses on factors internal to the person, such as genetic or biological

predispositions, personality traits, and behavioral choices regarding lifestyle and habits. Within this frame, remedies are typically confined to the private realm, emphasizing personal medical treatments or individual behavioral changes. In contrast, societal responsibility emphasizes external determinants relating to overarching structures, such as government policies, economic conditions, workplace environments, social inequalities, and broader cultural norms. In this framework, solutions require collective interventions and structural reforms, including policy-based remedies, industry regulations, and improvements in the public healthcare system.

A review article on media responsibility frames found that health problems, such as obesity, diabetes, depression, and cancer were studied, and individuals were held responsible for the causes and solutions in more than half of the content analysis studies (Temmann et al., 2021). In a study of U.S. newspaper articles and television news stories on responsibility frames regarding obesity, causal and solution responsibilities were attributed more to the individual than to society (Kim and Willis, 2007). U.S. newspaper articles and television news stories on depression also attributed more causal and solution responsibility to individuals than to society (Zhang et al., 2016), and the trend was similar in the German media (Wiedicke et al., 2022). In a study comparing U.S. and Chinese newspaper articles on depression, Chinese newspapers attributed more solution responsibility to society than to individuals but exhibited no difference between individuals and society in causal responsibility (Zhang and Jin, 2015).

Cross-national comparisons of responsibility frames are theoretically significant as they reveal that health attributions are not universal but deeply dependent on specific cultural and organizational contexts. Differences in the balance between individual and societal responsibility across nations signify the dominant cultural values embedded in a society. Western individualistic cultures tend to attribute responsibility to internal personal factors (Zhang et al., 2014).

Media responsibility framing has been extensively studied in the United States, Canada, the United Kingdom, Australia, and South Korea, but no such research has been conducted in Japan (Temmann et al., 2021). Various framing studies in the field of health communication have not been reported by Japanese authors (Guenther et al., 2021).

This study aimed to quantitatively examine responsibility frames for depression at the individual and societal levels through a content analysis of Japanese newspaper articles to determine how responsibility attributions are made. Long-term changes in responsibility frames will be examined and their relationship with policies and societal changes will be clarified.

The expectations for research questions that Japanese newspapers might attribute the responsibility for depression more to individuals than to society are grounded in two primary premises. First is the ongoing medicalization of mental health, where depression is increasingly defined through a biomedical lens (Zhang et al., 2016). This paradigm tends to confine both the causes and the remedies of the illness within the individual’s body or mind. Second is the preponderance of empirical evidence from Western contexts. Content analyses in the U.S. and Germany have consistently shown that media attribute significantly more causal and solution responsibility for

depression to individuals than to society, reflecting a global trend of individualized health discourse (Kim and Willis, 2007; Wiedicke et al., 2022). While Japan possesses a collectivistic cultural heritage, it has also undergone rapid Westernization and the adoption of modern medical models. Therefore, it is theoretically vital to examine whether Japanese media follow these dominant individualistic frames or provide a unique contextual alternative.

The research questions are as follows:

RQ1. When Japanese newspaper articles describe the causal responsibility for depression, do they attribute it to individuals rather than society?

RQ2. When Japanese newspaper articles describe solution responsibility for depression, do they attribute it to individuals rather than society?

RQ3. How has the proportion of Japanese newspaper articles attributing responsibility for depression to individuals and society changed over the years?

2 Methods

2.1 Sample

We collected news articles from three major national daily newspapers published in Japan: the Yomiuri Shimbun, the Asahi Shimbun, and the Mainichi Shimbun. We chose these newspapers because they are the highest-circulation daily newspapers in Japan, totaling approximately 13 million. News articles were collected from official article databases operated by the newspapers for the 30 years between 1993 and 2022. Full-text search and viewing of articles are available for the Yomiuri Shimbun from 1986 onward, the Asahi Shimbun from 1985 onward, and the Mainichi Shimbun from 1987 onward.

We searched articles using the Japanese keywords “*utsu*” (depression) or *utsu* (depressed) or *soukyokusei-shougai* (bipolar disorder)” in the headlines or in the main text of the articles; because a search for the Japanese word “*utsu*” also picked up unrelated words such as the city name “*Utsunomiya*,” frequent unrelated words were excluded by NOT search. We collected 22,715 articles (8,479 from Asahi Shimbun, 5,300 from Mainichi Shimbun, and 8,936 from Yomiuri Shimbun). To obtain a manageable sample, we selected 5,678 articles through systematic sampling by choosing every fourth article in the order of the date of publication after determining the starting point with a random number (Riffe et al., 2019). This method allowed for the extraction of a statistically valid sample across the entire three-decade period without temporal bias or over-representation of any single year. By ordering the articles chronologically, this approach ensured that the sample is not clustered around specific events or timeframes but is instead distributed evenly. The fixed-interval selection guaranteed that the sample remains proportional to the actual volume of coverage produced by the newspapers each year. After reading the selected articles ($n = 5,678$), those that fell into one of the following categories were excluded: (1) articles that were not displayed owing to copyright restrictions ($n = 324$); (2) articles where “*utsu*” was used as a Japanese word meaning other than depression ($n = 1,297$); (3) very short newspaper article like a

haiku ($n = 284$); (4) articles that had no relation to human depression like depressing weather ($n = 2,383$); and (5) articles on the subject of other diseases such as dementia ($n = 410$). Ultimately, 980 articles were included in this study.

2.2 Coding

We measured the news framing of depression responsibility using outcome variables for the responsibility frame (Table 1). The original outcome variables were obtained from a previous study on the responsibility frame for depression (Zhang and Jin, 2015). Zhang and Jin’s variables for depression were defined by referring to variables from a previous study on the responsibility frame for obesity (Kim and Willis, 2007). In this study, the frame categories for depression responsibility are referred to as outcome variables.

We measured the causal responsibility frame categorized into individual and societal levels, and the solution responsibility frame categorized into individual and societal levels. There were four subcategories for individual-level causes, society-level causes, individual-level solutions, and society-level solutions, respectively. Among the variables, the microlevel social environment subcategories in society-level causes and society-level solutions were measured in four additional subcategories: family, school, workplace, and community. These four additional subcategories were created to examine them more distinctly and were not included in prior studies.

To clarify the analytical framework, the operational definitions and coding examples for each category are detailed below.

TABLE 1 The outcome variables for the responsibility frame for depression.

(1) Individual-level causes for depression
a) Demographic factors
b) Genetics, personality, and health conditions
c) Behavior, lifestyle, and life events
d) Other
(2) Society-level causes for depression
a) Microlevel social environment Subcategories: family, school, workplace, or community
b) Macrolevel social environment
c) Public health system and policies
d) Other
(3) Individual-level solutions for depression
a) Demographic changes
b) Personality and health condition changes
c) Behavioral and lifestyle changes
d) Other
(4) Society-level solutions for depression
a) Microlevel social environment Subcategories: family, school, workplace, or community
b) Macrolevel social environment
c) Public health system and policies
d) Other

(1) Individual-level causes for depression

Demographic factors: age, gender, occupation, income, etc.

Genetics, personality, and health conditions: genetic/biological factors, personality factors, emotional deficiencies, pregnancy/childbirth, etc.

Behavior, lifestyle, and life events: unhealthy lifestyle (in diet, sleeping, work-life balance, etc.), sedentary and/or indoor lifestyle, etc.

(2) Society-level causes for depression

Microlevel social environment: risk factors in immediate social environment such as family, school, workplace, and community, etc.

Macrolevel social environment: cultural taboo, social injustice, inequality, prejudice, stigmatization, discrimination, struggling economy, recession, high unemployment, etc.

Public health system and policies: limited availability of and inadequate access to mental healthcare, lack of public health education and awareness, etc.

(3) Individual-level solutions for depression

Demographic changes: changes in income, socioeconomic status, etc.

Personality and health condition changes: take preventive actions, counseling, therapy, medications, hospitalization, etc.

Behavioral and lifestyle changes: healthy lifestyle, active and/or outdoor lifestyle, etc.

(4) Society-level solutions for depression

Microlevel social environment: address risk factors in immediate social environment such as family, school, workplace, community, etc.

Macrolevel social environment: change cultural taboo, social injustice, inequality, prejudice, stigmatization and discrimination; boost economy and create more jobs etc.

Public health system and policies: improve availability of mental healthcare and depression prevention and treatment, provide law/policy-supported prevention and intervention, etc.

We translated the outcome variables into Japanese and created a coding manual. To standardize the data across different newspapers with varying article lengths and editorial styles, this study utilized binary coding. Each subcategory of responsibility was coded as either “1 (present)” if mentioned in the article or “0 (absent)” if not. This measurement approach effectively standardized the unit of analysis. Each variable was scored manually as 0 (absent) or 1 (present). If a cause or solution was mentioned in the article, it was coded as 1 in the appropriate subcategory. If the same cause or solution subcategory was mentioned more than once in an article, it was coded only once. In the microlevel social environment, if any one of the four additional subcategories (family, school, workplace, or community) was 1, we coded it as 1. In the four main categories (individual-level causes, society-level causes, individual-level solutions, and society-level solutions), if any one of the subcategories was 1, we coded them as 1.

2.3 Statistical analysis and interrater reliability

A chi-square test was conducted to compare the proportion of the responsibility frame between the first period (1993–2002), the second period (2003–2012), and the third period (2013–2022). Statistical significance was set at $p < 0.05$.

The coding was conducted by two native Japanese coders. The training was conducted using articles that were not included in the sample. The first coder (FA) coded all the sample articles ($n = 980$), and the second coder (EF) coded the randomly selected 20% of the sample articles ($n = 197$). We used Gwet's AC₁ to assess intercoder reliability (Gwet, 2008). Gwet's AC₁ between two coders was 0.90 (95% confidence interval: 0.89–0.91) computed by the package ‘irrCAC’ in R.

3 Results

The results of the manual coding are presented in Table 2. RQ1 describes the causal responsibility for depression in newspaper articles published over a 30-year period. The analyses found that 236 articles (24% of the sample) attributed the causal responsibility for depression to individuals, 606 articles (62%) to society, and more articles attributed it to society than to individuals. The most common subcategory of individual-level causal responsibility was “Genetics, personality, and health conditions” with 206 articles (21%), while the most common subcategory of society-level causal responsibility was “Microlevel social environment” with 539 articles (55%). When further disaggregated, workplace attributions were predominant at 43%, whereas family (11%), school (4%), and community (1%) were cited far less frequently. These findings indicate that while Japanese newspapers favor a societal frame, this portrayal is specifically focused on the workplace rather than a broad spectrum of social environments.

RQ2 describes the solution responsibility for depression in newspaper articles. Most articles attributed solution responsibility to individuals, accounting for 618 (63%), while 310 (32%) attributed it to society. The most common subcategory of individual-level solution responsibility was “Personality and health condition changes,” with 533 articles (54%), while the most common subcategory of society-level solution responsibility was “Microlevel social environment,” with 217 articles (22%). Furthermore, the most common subcategory of “Microlevel social environment” was the workplace, with 131 (13%).

RQ3 describes the longitudinal changes in responsibility attribution to individuals or society. Figure 1 shows annual trends in the number of articles in the sample. Between 1993 and 2002, there were 22 or fewer cases per year, but this increased to 32 in 2003, reaching 68 in 2007, the highest number in 30 years, followed by 44 or more cases until 2012. Between 2013 and 2022, they remained almost unchanged, ranging from 29 to 49. Based on this, the 30-year period was divided into the first period, when the number of articles was small (1993–2002, 146 articles); the second period, when the number of articles increased rapidly (2003–2012, 447 articles); and the third period, when a certain number of articles continued (2013–2022, 387 articles) (Table 2).

TABLE 2 Number and percentage of articles attributing responsibility for causes or solutions.

Period	First period		Second period		Third period		Total	
	Years		Years		Years		Years	
	1993–2002		2003–2012		2013–2022			
Articles (n)	146		447		387		980	
	n	%	n	%	n	%	n	%
(1) Individual-level causes for depression								
a) Demographic factors	2	1%	11	2%	11	3%	24	2%
b) Genetics, personality, and health conditions	38	26%	89	20%	79	20%	206	21%
c) Behavior, lifestyle, and life events	1	1%	7	2%	11	3%	19	2%
d) Other	0	0%	0	0%	0	0%	0	0%
Individual-level causes (a or b or c or d)	40	27%	99	22%	97	25%	236	24%
(2) Society-level causes for depression								
a) Microlevel social environment	78	53%	240	54%	221	57%	539	55%
Subcategory: workplace	61	42%	185	41%	172	44%	418	43%
Subcategory: school	5	3%	17	4%	15	4%	37	4%
Subcategory: family	19	13%	45	10%	45	12%	109	11%
Subcategory: community	1	1%	4	1%	2	1%	7	1%
b) Macrolevel social environment	10	7%	16	4%	6	2%*	32	3%
c) Public health system and policies	1	1%	6	1%	5	1%	12	1%
d) Other	12	8%	25	6%	37	10%	74	8%
Society-level causes (a or b or c or d)	93	64%	265	59%	248	64%	606	62%
(3) Individual-level solutions for depression								
a) Demographic changes	0	0%	0	0%	0	0%	0	0%
b) Personality and health condition changes	94	64%	254	57%	185	48%*	533	54%
c) Behavioral and lifestyle changes	24	16%	121	27%*	116	30%*	261	27%
d) Other	1	1%	12	3%	12	3%	25	3%
Individual-level solutions (a or b or c or d)	95	65%	293	66%	230	59%	618	63%
(4) Society-level solutions for depression								
a) Microlevel social environment	25	17%	116	26%	76	20%	217	22%
Subcategory: workplace	15	10%	63	14%	53	14%	131	13%
Subcategory: school	0	0%	13	3%	6	2%	19	2%
Subcategory: family	6	4%	31	7%	14	4%	51	5%
Subcategory: community	4	3%	22	5%	4	1%	30	3%
b) Macrolevel social environment	8	5%	24	5%	24	6%	56	6%
c) Public health system and policies	10	7%	51	11%	45	12%	106	11%
d) Other	0	0%	0	0%	1	0%	1	0%
Society-level solutions (a or b or c or d)	36	25%	153	34%*	121	31%	310	32%

*Significant difference between first period and this period (chi-square test $p < 0.05$).

Each period corresponded to significant shifts in the clinical, social, and legislative landscape of depression in Japan. The First Period (1993–2002: Emergence of Social Issues and Introduction of Medicalization) was characterized by the medicalization of depression. The approval of SSRI antidepressants in 1999 reframed depression from a personal trait or “weakness of

spirit” into a treatable medical condition. Simultaneously, “death from overwork” and overwork-related suicides began to emerge as prominent social concerns. The Second Period (2003–2012: Policy Intervention Phase) marked the transition of mental health into a primary political and administrative agenda. Following the record-high number of suicides in Japan in 2003,



FIGURE 1
Annual trends in the number of articles of the sample.

the government enacted the Basic Act on Suicide Countermeasures in 2006. The Third Period (2013–2022: Promotion of Societal Measures) represents a phase of institutionalized structural reform. This period saw the enactment of the Act Promoting Measures to Prevent Death and Injury from Overwork in 2014 and the mandating of the “Stress Check Program” in workplaces in 2015. These developments signify a mature understanding of depression as a socially driven illness requiring comprehensive structural solutions beyond individualized medical care.

The percentage of articles that attributed causal responsibility to individuals or society did not change significantly among the first, second, and third periods. The percentage of articles that attributed solution responsibility to the individual did not change significantly, but the percentage of articles that attributed it to society increased in the second period (34%) compared with that of the first period (25%) [$\chi^2(1, N = 593) = 4.64, p = 0.031$]. Regarding the subcategories, the percentage of articles attributed to the “Macrolevel social environment” of society-level causes decreased in the third period (2%) compared with that of the first period (7%) [$\chi^2(1, N = 533) = 10.2, p < 0.01$]. The percentage of articles on “Personality and health condition changes” of individual-level solution decreased in the third period (48%) compared with that of the first period (64%) [$\chi^2(1, N = 533) = 11.7, p < 0.01$], and the percentage of articles on “Behavioral and lifestyle changes” increased in the second (27%) and third period (30%) compared to that of the first (16%) [$\chi^2(1, N = 533) = 10.0, p < 0.01$].

4 Discussion

The overarching findings of this study reveal that the responsibility framing of depression in Japanese newspapers is characterized by a paradoxical structure: the socialization of causes combined with the re-individualization of solutions. While a vast body of literature from Western contexts suggests a dominant individual responsibility model where both the causes and remedies of health issues are attributed to the individual, the Japanese pattern identified here presents a distinct departure. Specifically, the media frame depression as a socially triggered condition rooted in the workplace environment (socialization of causal responsibility); yet they simultaneously confine its resolution to the realm of private medical care and personal traits (individualization of solution responsibility). This coexistence of social causes and individual solutions signifies a transitional discursive state in Japan, where depression is acknowledged as a societal problem while the functional burden of recovery remains placed firmly on the affected individual.

As the data demonstrate, causal attributions are overwhelmingly driven by the workplace context, with other micro-level environments like family and school remaining largely invisible. Theoretically, this signifies that the socialization of depression in Japan is a context-specific phenomenon rooted in the discourse of “Death from overwork” and labor-related stress, rather than a general shift toward a holistic societal responsibility frame. Therefore, we must be cautious in generalizing these results as evidence of a broad societal attribution. Since around 2000, “Death from overwork” and

“Overwork suicides” have become a social problem in Japanese workplaces (Kondo and Oh, 2010; Yukawa et al., 2024). This difficult situation in the workplace drew media attention, which might have led to a responsibility frame that seeks causal responsibility in the workplace.

Regarding the solution responsibility, more articles attributed it to the individual than to society. The subcategory “Personality and health condition changes” accounted for 54% of the sample, with solution by medical care being the primary responsibility frame. Many articles (43%) attributed causal responsibility to the workplace, whereas a few (13%) attributed it to solution responsibility. Despite the media’s focus on workplace responsibility for causes, the lack of articles calling for workplace responsibility for solutions may discourage people from seeking solutions and pursuing improvement efforts in the workplace. In Japan, mental health in the workplace has become a major issue. Subsequently, the Act Promoting Measures to Prevent Death and Injury from Overwork was passed in 2014 (Yamauchi et al., 2018), which led to increased attention to solution responsibility in the workplace.

Regarding the 30-year change in the number of articles on depression, there was an increase in the number of articles in 2003 and a sharp increase in 2006. In 2003, the number of suicides in Japan was the highest in the past 30 years (Yukawa et al., 2024), which may have increased the number of articles on depression in relation to suicide. As the increase in suicides became a social problem, the Basic Act on Suicide Countermeasures was passed and enforced in 2006, and the government promoted suicide prevention measures (Nakanishi et al., 2020). Japanese newspapers frequently covered the government’s policies, and hence, the coverage of depression could have increased significantly from 2006 onward.

Over the 30-year period, there has been a downward trend in the percentage of articles that place individual solution responsibility on “Personality and health condition changes”. In Japan, the antidepressant selective serotonin reuptake inhibitor (SSRI) was approved in 1999 (Nakagawa et al., 2007), and the medicalization of depression progressed with an increase in the number of outpatients treated starting around the year 2000 (Kitanaka, 2012), suggesting that the proportion of articles on “Personality and health condition changes” was high. However, the percentage of articles on “Behavioral and lifestyle changes” has increased owing to the progress in suicide prevention policies, overwork measures for workers starting around 2006, the need for solutions through stress check programs, and other workplace mental health measures (Kawakami and Tsutsumi, 2016).

Compared to a prior study that analyzed the responsibility frame of U.S. and Chinese newspaper articles on depression (Zhang and Jin, 2015) with Japanese newspaper articles ($n = 507$) for the same 2000–2012 period, a smaller percentage of articles in Japan placed some subcategories of causal responsibility: “Genetics, personality, and health conditions” (U.S. 59%, China 51%, Japan 21%), “Behavior, lifestyle, and life events” (U.S. 33%, China 27%, Japan 1%), “Macrolevel social environment” (U.S. 10%, China 41%, Japan 4%), “Public health system and policies” (U.S. 14%, China 28%, Japan 1%), and a larger percentage of articles placed the causal responsibility on the “Microlevel social environment” (12% in the U.S., 38% in

China, 55% in Japan) than in both countries. In Japan, causal responsibility is concentrated at the microlevel of society, such as in the workplace. The tendency to place causal responsibility on individuals rather than society has often been noted in prior studies on news coverage in the health and medical fields (Kim and Willis, 2007). Although a review article of content analyses found that individuals were held mostly causal and solution responsibility in many studies, studies conducted outside the Western context, particularly India and China, adopted a more collective perspective on responsibility for HIV/AIDS, depression, and schizophrenia (Temmann et al., 2021). A larger proportion of articles in Japan attributed causal responsibility to society than to individuals, and the results support a medical anthropological study (Kitanaka, 2012) that indicated that depression was recognized as a result of work stress through overwork cases in Japan.

This study demonstrates a theoretical dissociation between causal and solution responsibility. Conventional framing theory often assumes a logical consistency between the two dimensions: societal causes should naturally lead to societal solutions (Zhang and Jin, 2015). However, the Japanese pattern reveals a structure where the media clearly locate the source of depression in a specific social environment (the workplace) while continuing to rely on individualized medical remedies. This finding suggests a critical condition for responsibility framing theory: the acknowledgment of societal origins does not automatically translate into a call for systemic reform, particularly when the discourse of medicalization remains dominant in the solution phase.

Our study had several limitations. The sample was collected from major newspapers and not from visual or social media sources. To observe longitudinal changes over a 30-year period, we had to use newspapers that were consistently published. Another limitation was that all articles were coded with the same weight without considering factors such as whether they were published on the prominent front page, contained photographs or illustrations, or the number of words in the article. Articles that made a strong impression on readers may have been underweighted.

In conclusion, the content analysis of newspaper articles framing depression in Japan revealed that several articles placed causal responsibility for depression on society rather than on individuals. This differs from prior studies on articles about other diseases and studies on depression in the U.S., where more causal responsibility was attributed to individuals than to society. Moreover, more articles sought solutions for depression from individuals rather than from society. In Japan, where death from overwork has become a social problem, the number of news articles on depression has increased. Depression is now understood as a socially caused illness, leading to the development of policies for workers and expanded coping methods beyond medical treatment.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

FA: Conceptualization, Writing – original draft, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Validation, Visualization. TO: Conceptualization, Funding acquisition, Methodology, Writing – review & editing. EF: Investigation, Validation, Writing – review & editing. HO: Writing – review & editing. TK: Project administration, Supervision, Writing – review & editing.

Funding

The author(s) declared that financial support was received for this work and/or its publication by the Japan Society for the Promotion of Science KAKENHI (22H00939).

References

- Bromet, E., Andrade, L. H., Hwang, I., Sampson, N. A., Alonso, J., de Girolamo, G., et al. (2011). Cross-national epidemiology of DSM-IV major depressive episode. *BMC Med.* 9, 1–16. doi: 10.1186/1741-7015-9-90
- Buckton, C. H., Patterson, C., Hyseni, L., Katikireddi, S. V., Lloyd-Williams, F., Elliott-Green, A., et al. (2018). The palatability of sugar-sweetened beverage taxation: a content analysis of newspaper coverage of the UK sugar debate. *PLoS One* 13, e0207576. doi: 10.1371/JOURNAL.PONE.0207576
- Entman, R. M. (1993). Framing: toward clarification of a fractured paradigm. *J. Commun.* 43, 51–58. doi: 10.1111/J.1460-2466.1993.TB01304.X
- Furihata, R., Konno, C., Suzuki, M., Takahashi, S., Kaneita, Y., Ohida, T., et al. (2018). Unhealthy lifestyle factors and depressive symptoms: a Japanese general adult population survey. *J. Affect. Disord.* 234, 156–161. doi: 10.1016/J.JAD.2018.02.093
- Guenther, L., Gaertner, M., and Zeitz, J. (2021). Framing as a concept for health communication: a systematic review. *Health Commun.* 36, 891–899. doi: 10.1080/10410236.2020.1723048
- Gwet, K. L. (2008). Computing inter-rater reliability and its variance in the presence of high agreement. *Br. J. Math. Stat. Psychol.* 61, 29–48. doi: 10.1348/000711006X126600
- Hay, S. I., Ong, K. L., Santomauro, D. F., Bhoomadevi, A., Aalipour, M. A., Aalruz, H., et al. (2025). Burden of 375 diseases and injuries, risk-attributable burden of 88 risk factors, and healthy life expectancy in 204 countries and territories, including 660 subnational locations, 1990–2023: a systematic analysis for the global burden of disease study 2023. *Lancet* 406, 1873–1922. doi: 10.1016/S0140-6736(25)01637-X
- Ishikawa, H., Tachimori, H., Takeshima, T., Umeda, M., Miyamoto, K., Shimoda, H., et al. (2018). Prevalence, treatment, and the correlates of common mental disorders in the mid 2010's in Japan: the results of the world mental health Japan 2nd survey. *J. Affect. Disord.* 241, 554–562. doi: 10.1016/J.JAD.2018.08.050
- Iyengar, S. (1991). *Is Anyone Responsible?: How Television Frames Political Issues*. Chicago: University of Chicago Press.
- Iyengar, S. (1996). Framing responsibility for political issues. *Ann. Am. Acad. Pol. Soc. Sci.* 546, 59–70. doi: 10.1177/0002716296546001006
- Jarlenski, M., and Barry, C. L. (2013). News Media coverage of trans fat: health risks and policy responses. *Health Commun.* 28, 209–216. doi: 10.1080/10410236.2012.669670
- Kawakami, N., and Tsutsumi, A. (2016). The stress check program: a new national policy for monitoring and screening psychosocial stress in the workplace in Japan. *J. Occup. Health* 58, 1–6. doi: 10.1539/JOH.15-0001-ER
- Kim, S.-H., and Willis, L. A. (2007). Talking about obesity: news framing of who is responsible for causing and fixing the problem. *J. Health Commun.* 12, 359–376. doi: 10.1080/10810730701326051
- Kitanaka, J. (2012). *Depression in Japan: Psychiatric Cures for a Society in Distress*. Princeton: Princeton University Press.
- Kondo, N., and Oh, J. (2010). Suicide and *Karoshi* (death from overwork) during the recent economic crises in Japan: the impacts, mechanisms and political responses. *J. Epidemiol. Commun. Health* 64, 649–650. doi: 10.1136/JECH.2009.090787

Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

- Li, L., Wu, C., Gan, Y., Qu, X., and Lu, Z. (2016). Insomnia and the risk of depression: a meta-analysis of prospective cohort studies. *BMC Psychiatry*. 16, 375. doi: 10.1186/S12888-016-1075-3
- Mammen, G., and Faulkner, G. (2013). Physical activity and the prevention of depression: a systematic review of prospective studies. *Am. J. Prev. Med* 45, 649–657. doi: 10.1016/J.AMEPRE.2013.08.001
- Nakagawa, A., Grunebaum, M. F., Ellis, S. P., Oquendo, M. A., Kashima, H., Gibbons, R. D., et al. (2007). Association of suicide and antidepressant prescription rates in Japan, 1999–2003. *J. Clin. Psychiatr.* 68, 908–916. doi: 10.4088/JCP.V68N0613
- Nakanishi, M., Endo, K., Ando, S., and Nishida, A. (2020). The impact of suicide prevention act (2006) on suicides in Japan. *Crisis* 41, 24–31. doi: 10.1027/0227-5910/A000599
- Riffe, D., Lacy, S., Watson, B. R., and Fico, F. (2019). *Analyzing Media Messages: Using Quantitative Content Analysis in Research*. New York: Routledge. doi: 10.4324/9780429464287
- Rodgers, B., Korten, A. E., Jorm, A. F., Jacomb, P. A., Christensen, H., and Henderson, A. S. (2000). Non-linear relationships in associations of depression and anxiety with alcohol use. *Psychol. Med.* 30, 421–432. doi: 10.1017/S0033291799001865
- Semetko, H. A., and Valkenburg, P. M. (2000). Framing European politics: a content analysis of press and television news. *J. Commun.* 50, 93–109. doi: 10.1111/j.1460-2466.2000.tb02843.x
- Temmann, L. J., Wiedicke, A., Schaller, S., Scherr, S., and Reifegerste, D. (2021). A systematic review of responsibility frames and their effects in the health context. *J. Health Commun.* 26, 828–838. doi: 10.1080/10810730.2021.2020381
- Wiedicke, A., Reifegerste, D., Temmann, L. J., and Scherr, S. (2022). Framing depression: individual, societal, and social network responsibility attributions in Media coverage. *Eur. J. Heal. Commun.* 3, 92–117. doi: 10.47368/ejhc.2022.305
- Yamauchi, T., Sasaki, T., Yoshikawa, T., Matsumoto, S., and Takahashi, M. (2018). Incidence of overwork-related mental disorders and suicide in Japan. *Occup. Med. (Lond)* 68, 370–377. doi: 10.1093/OCCMED/KQY080
- Yukawa, K., Shimanuki, M., and Eguchi, H. (2024). Prevention and future issues of *Karoshi* and suicide by overwork in Japan. *J. Natl. Inst. Public Health* 73, 16–31. doi: 10.20683/JNIPH.73.1_16
- Zhang, Y., and Jin, Y. (2015). Who's responsible for depression?: Chinese and US newspaper framing of causal and problem-solving responsibilities for depression, 2000–2012. *J. Int. Commun.* 21, 204–225. doi: 10.1080/13216597.2015.1052532
- Zhang, Y., Jin, Y., Stewart, S., and Porter, J. (2016). Framing responsibility for depression: how U.S. news media attribute causal and problem-solving responsibilities when covering a major public health problem. *J. Appl. Commun. Res.* 44, 118–135. doi: 10.1080/00909882.2016.1155728
- Zhang, Y., Jin, Y., and Tang, Y. (2014). Framing depression: cultural and organizational influences on coverage of a public health threat and attribution of responsibilities in Chinese news Media, 2000–2012. *Journal. Mass Commun. Q.* 92, 99–120. doi: 10.1177/1077699014558553