



Research article

Exploring stigmatization in digital newspaper coverage of substance use disorder

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ABSTRACT

Substance use disorder is a global health issue that profoundly affects both individuals and societies. Social stigma acts as a significant barrier to treatment motivation. Mass media plays a substantial role in shaping societal perceptions. This study aims to identify stigmatizing attitudes in news narratives concerning substance use disorder as portrayed in digital newspapers. We examined news articles from the top eight national digital newspapers published during 2022 by using quantitative and retrospective content analysis. Following the review, we collected 1.233 news articles, removed 480 articles which were irrelevant or duplicate, and analyzed the remaining 753 articles using quantitative content analysis methods on SPSS 26.0. The majority of news articles depict substance use disorder in a negative consideration. The analysis revealed that nearly all news sources were news agencies and only 11% of the articles offered potential solutions. Alarming, 69.7% of the articles contained stigmatizing content, while 53.1% directly impacted the social lives of individuals with substance use disorder. Furthermore, 44.1% of the articles reinforced a dangerous perception associated with individuals with substance use disorder. To address these issues, we recommend a more empathetic portrayal of substance use disorder, support for help-seeking behavior, and advocacy for effective solutions in news coverage.

1. Introduction

Substance use disorder (SUD) is a significant public mental health issue that affects individuals and communities worldwide. Substance abuse is characterized by an individual's inability to quit substance use despite attempting to do so, escalating substance use over time, experiencing withdrawal symptoms upon cessation, persisting in use despite adverse consequences, and spending a significant portion of time for seeking substances [1]. While substance use disorders are chronic and treatable medical conditions, individuals with substance use disorders are often subjected to discrimination and stigma that can affect their health in various ways.

Stigma is a form of discrimination directed toward a definable group of individuals, a place, or a nation. Individuals with SUD may

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be exposed to stigma with false beliefs or unfounded notions (e.g. being 'dangerous,' 'unable to manage treatment,' or 'flawed,') thereby leading to a disgraceful or negative consideration [2]. Negative stereotypes about individuals with SUD can evoke fear, pity, and even anger in others [3,4]. Stigma can make these people less willing to seek treatment [3–6]. When they are exposed to stigma with negative labels or stereotypes, there is a higher likelihood of supporting punitive policies rather than recovery-oriented ones within the community [2].

Society relies on the media as a common source of health-related information. The delivery of accurate and reliable health information to the public by the media plays a pivotal role in addressing the challenges encountered. Mass media influences people in various ways, including perceptions of social issues and public policy. In today's world, the internet is popular and broadly appeals to people of all ages. That said, some aspects of it are positive and some others are negative. As digital media is one of the primary means through which individuals acquire information, media representations have significant effects on shaping opinions and processing information [7,8].

The media is the primary source of information for most individuals about global, social, and political events, as well as details about personal behaviors and lifestyles [7]. In this context, it also plays a significant role in shaping people's perceptions and attitudes toward substance use disorder. When SUDs are portrayed negatively in the news media (for example, as having a weak moral character, exhibiting violence, or engaging in criminal activities), individuals may become reluctant to seek substance use treatment or rehabilitation support [9]. Digital newspapers serve as crucial news and information sources for many people, making it necessary to investigate how substance use disorder is depicted in this medium.

The media portrayals of individuals with SUD can have a powerful impact on readers' stigma concerning these individuals. To capture readers' attention, news stories related to health issues often incorporate one or more individual portrayals, which involve statements from specific individuals experiencing the relevant health issue. Individual portrayals are also the primary method for presenting health issues in entertainment media, using a character who is experiencing a particular problem. While individual portrayals increase readers' engagement and emotional responses to media content [10,11], they can also exacerbate stigma.

Furthermore, individuals are often ready to believe what they read or see in the media [7]. People with mental illnesses are affected by negative presentations in the media, as well. They perceive that the media's portrayal is openly discriminatory and stigmatizing. Consequently, individuals with SUD, especially those struggling with alcohol or substance addiction, believe that they are restricted and marginalized due to these news reports [12]. A study titled 'Stigmatization of people with mental illnesses,' reported that the belief of individuals with mental illness being aggressive was more likely to be derived from media reports containing aggression and violence [13]. In another study, it was determined that a low proportion of media reports on individuals with mental illness stigmatized these individuals and characterized them as violent and dangerous, and there has been a decrease in stigmatization in the last two decades [14].

Therefore, it is necessary to identify the prevailing framing tools and dominant narratives regarding substance use disorder in news media. Evaluating how substance use disorder news is presented, the way it is handled, and the existence of stigmatizing attitudes in these reports, if any, are of capital importance. In this context, this study aims to identify stigmatizing attitudes in news narratives about substance use disorder published in digital newspapers.

2. Materials and methods

The study was designed quantitatively and retrospectively. Presentation formats of substance use disorder news in digital media in 2022 were examined in eight newspapers (A, B, C, D, E, F, G, and H). Data were collected from the newspapers' databases. Specifically, the following research questions were analyzed.

2.1. Research questions

- RQ 1. What are the prominent themes in substance use disorder-related news?
- RQ 2. Whose perspectives are included in the news?
- RQ 3. How are individuals with substance use disorders characterized in the news?
- RQ 4. What word choices do digital newspapers prefer for substance use disorder?
- RQ 5. What visuals are used in digital news?
- RQ 6. What aspects of substance use disorder are emphasized in digital news?
- RQ 7. What characteristics are associated with stigma in substance use disorder news?
- RQ 8. Who are the actors featured in the news?"

2.2. Sample and population

The population of the study consisted of daily national newspapers, while the sample consists of eight newspapers (A, B, C, D, E, F, G, and H) selected based on their circulation and readership figures. These newspapers were chosen because they reach a broad readership, represent respected journalistic institutions, and reflect various ideological perspectives.

2.3. Data collection and data collection tools

The data were collected by searching electronic databases of the relevant newspapers for keywords such as 'substance use,' 'substance abuser,' 'substance abuse,' 'drug use,' 'drug abuser,' 'drug abuse,' 'alcohol abuser,' and 'alcohol abuse' between January 1, 2022, and December 31, 2022. A total of 1233 news articles were obtained upon this search. After removing off-topic news and duplicates (n = 480), 753 news articles remained for analysis. Graph 1 shows the distribution of news articles by newspapers.

2.4. Codebook development and coding procedures

To facilitate the coding process, each digital news article was transferred to an electronic spreadsheet, including the newspaper of publication and the month of publication. To guide the content analysis of each digital news article, a coding form was created based on previous studies examining substance use disorder and stigma [9,15,16]. The final coding form included a total of twelve criteria categorized into three main categories: format, content, and visual elements.

Initially, 25 pilot articles were independently coded by the main author and the second author. Discrepancies were resolved, and the coding form was revised. For the final sample, the first 100 news articles were independently coded by both authors. Cohen's Kappa values ranged from 0.66 to 0.91 (average Cohen's $\kappa = 0.75$), indicating sufficient inter-rater reliability for categorical coding variables.

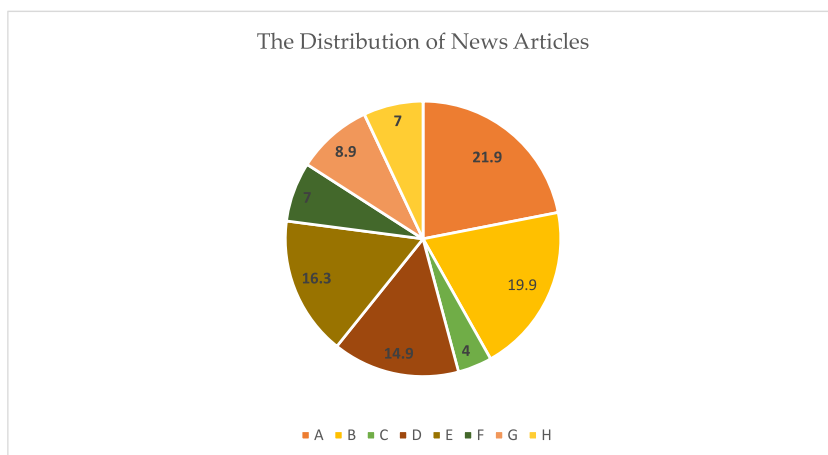
2.5. Data analysis

The data were analyzed using the SPSS 26.0 software. Descriptive statistical methods, including frequency and percentage distributions, as well as measures of central tendency such as mean and standard deviation, were used for data analysis. Chi-square (X^2) test was performed to determine whether or not there was any difference between the variables. In the study, p value of <0.05 was considered as statistically significant.

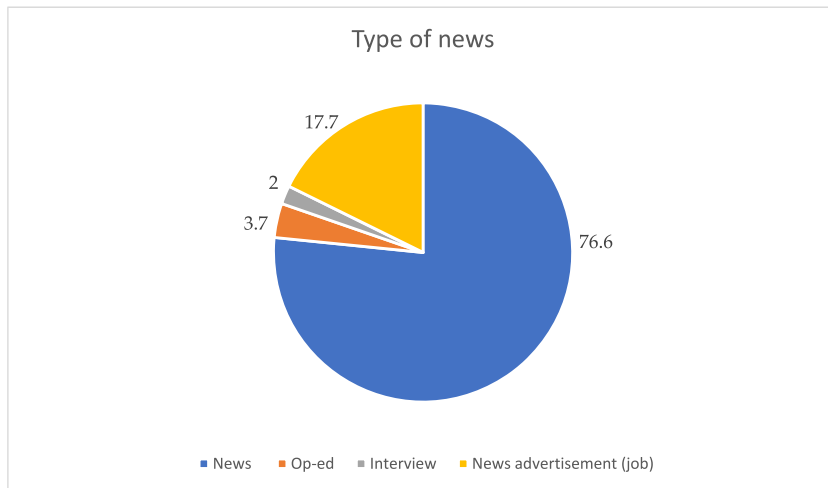
3. Results

In the study, 753 news articles from eight digital newspapers were examined. The data were analyzed on the basis of text type, topic, publication period, news source, use of visual materials in the news, suggestions for solutions to the issue and stigmatizing elements related to substance use disorders. Graph 2 shows the types of news items.) According to the data in Graph 2, the majority of the media content (76.6%) consisted of news articles that provide information about current events that concern the public, were based on objective data, and were obtained from reliable sources. This emphasized the dominance of news articles in media content. Following news articles, columns, which contain the author's personal opinions and in-depth comments on specific issues and are usually published under the author's name, accounted for 17.7% of the total content. Interviews between the journalist and one or more people in a written or oral question-and-answer format were ranked as third with 3.7%, while job advertisements, which provide information about specific job positions or career opportunities and aim to guide and encourage applications, accounted for a smaller portion of the content (2%).

Table 1 shows data related to the subject of the text examined in newspaper articles. When examining the table, it was observed that in five newspapers, there was a higher percentage of articles related to legal proceedings, while three newspapers contained articles related to a propensity for violence. In one newspaper, there was a comparatively higher focus on the causes/effects of addiction and information about treatment when compared to the other newspapers. These findings created a statistically significant difference ($p \leq 0.005$).



Graph 1. Distribution of news articles by newspapers.



Graph 2. Distribution of news according to text type.

Table 1
Comparison of the subject of the news text.

Newspaper name	Legal processes		Addiction		Death/injury		Propensity for violence	
	n	%	n	%	n	%	n	%
A	69	34,5	57	39,9	22	25,0	46	20,8
B	3	1,5	16	11,2	21	23,9	53	24,0
C	18	9,0	10	7,0	3	3,4	5	2,3
D	22	11,0	16	11,2	12	13,6	27	12,1
E	18	9,0	12	8,4	17	19,3	38	17,1
F	34	17,0	13	9,1	7	8,0	23	10,2
G	20	10,0	7	4,9	3	3,4	20	10,0
H	16	8,0	12	8,4	3	3,4	8	3,5
Total	200	100,0	143	100,0	88	100,0	220	100,0
Pearson Chi-Square	0,000		0,000		0,399		0,017	

According to [Table 2](#) when the subject of the news text was evaluated according to the publication periods of the news, it was found that the number of news increased especially in the autumn period and more news was reported on judicial processes, addiction, and the tendency to violence during this period. Moreover, death and injury news were covered more intensely in the winter period. Interestingly, while death and injury news were more common in the winter period, violence news was more common in the autumn

Table 2
Distribution of subjects according to publication periods.

publication period/subject of the news article	Legal processes		Addiction		Death/injury		Propensity for violence	
	n	%	n	%	n	%	n	%
Winter								
December	19	9,5	13	9,1	14	15,9	8	3,6
January	12	6,0	9	6,3	10	11,4	18	8,2
February	10	5,0	7	4,9	11	12,5	23	10,5
Spring								
March	9	4,5	7	4,9	3	3,4	11	5,0
April	19	9,5	19	13,3	16	18,2	16	7,3
May	20	10,0	7	4,9	2	2,3	9	4,1
Summer								
June	10	5,0	14	9,8	2	2,3	3	1,4
July	13	6,5	5	3,5	3	3,4	20	9,1
August	29	14,5	15	10,5	5	5,7	20	9,1
Autumn								
September	32	16	17	11,8	2	2,3	50	22,7
October	16	8,0	18	12,6	11	12,5	22	10,0
November	11	5,5	12	8,4	9	10,2	20	9,1
Total	200	100,0	143	100,0	88	100,0	220	100,0
Pearson Chi-Square	P = 0,020		P = 0,188		P = 0,000		P = 0,000	

Table 3
Comparison of news sources according to newspapers.

Newspaper name/News source	The Author		A mental health professional		Other health professionals		news agency		The Health Ministry		External news		No source		Total		Pearson Chi-Square
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
A	22	13,3	4	2,4	4	2,4	59	35,8	0	0,0	5	3,0	71	43,0	165	100,0	0,000
B	8	5,3	1	0,7	2	1,3	69	46,0	1	0,7	1	0,7	68	45,3	150	100,0	
C	2	6,7	1	3,3	0	0,0	19	63,3	0	0,0	0	0,0	8	26,7	30	100,0	
D	10	8,9	5	4,5	0	0,0	75	67,0	1	0,9	1	0,9	18	16,1	112	100,0	
E	40	32,5	4	3,3	1	0,8	22	17,9	0	0,0	1	0,8	55	44,7	123	100,0	
F	1	1,9	0	0,0	0	0,0	10	18,9	2	3,8	0	0,0	40	75,5	53	100,0	
G	6	9,0	1	1,5	1	1,5	35	52,2	0	0,0	1	0,8	23	34,3	67	100,0	
H	0	0,0	6	11,3	4	7,5	0	0,0	4	7,5	0	0,0	35	66,0	53	100,0	

period. This has caused a statistically significant difference ($p \leq 0.005$).

When Table 3 was analyzed, it was found that almost all the newspapers used news agencies as news sources, and the Ministry of Health was hardly used as a news source. While mental health professionals were cited in a limited number, there was a high rate of news articles that did not specify the source, and this finding caused a statistically significant difference ($p \leq 0.005$).

A total of 753 news items were analyzed in the study. The number of news items offering solutions was $52 + 24 + 7 = 83$. Therefore, the number of news items offering solutions accounted for only 11% of the total number of news items. These findings are presented in Table 4.

When a total of 83 news items were analyzed within themselves, it was determined that 52 news items were related to preventive content (62.6%), 24 news items were on treatment (28.9%) and 7 news items were related to rehabilitation (8.5%). It is a remarkable finding that only 83 (11%) of the total 753 news items were about news on solution proposals. When the content of the news on solution proposals was analyzed, it was found that the highest rate (62.6%) included preventive measures, followed by news on treatment, and the number of news containing information on rehabilitation was very low (8.5%). There was no statistically significant ($p \geq 0.005$) difference between the suggestions for solutions among the newspapers.

When the characteristics and content of the visual materials used in the news were analyzed, it was found that the real photographs were given visibly at the highest rate, and the rate of not using visual materials was higher in only 1 newspaper (newspaper D). It was observed that the photograph of the individual was mostly included in the visuals, and although it varied according to the newspapers, photographs of the crime scene and victims were also included. Only one newspaper (newspaper A) featured corporate photographs more than the other newspapers. When the newspapers were evaluated in terms of the use and content of visuals in the news, it was observed that all these variables created a statistically significant ($p \leq 0.005$) difference. These findings are presented in Table 5.

When Table 6 was analyzed, it was determined that the definition of "substance/drug abuser" was used at the highest rate. Following this definition, the preferred concept was "Dependent". These definitions were used more frequently than the other definitions and this situation created a statistically significant difference ($p \leq 0.005$). The frequency of using the concept "perpetrator of crime" was also high, but the frequency of use this concept among newspapers did not create a statistically significant difference ($p \geq 0.005$). Stigmatizing expressions such as "junkie", "alcoholic", "drunk", and "former addict" were not preferred.

As can be seen in Tables 6 and it was observed that in the analyzed newspapers, the confidentiality of identities was given importance while making news about substance use disorder, but the rate of news items where the name/surname was disclosed was considerably high. There were statistically significant ($p \leq 0.005$) differences in case of writing the name of the individual clearly in the newspapers and not including identity information.

It was examined whether or not there was stigmatizing content about substance use disorder in the newspaper news, and it was determined that 69.7% of the 753 news items in the sample had stigmatizing content.

It was found that the stigmatizing text in the news was the highest (53.1%) in content that could directly affect the social life of individuals with substance use disorder such as "should not be employed" and "should not get married", followed by 44.1% stigmatizing content that individuals with substance use disorder are dangerous, and it was observed that this created a statistically significant ($p \leq 0.005$) difference between newspapers.

4. Discussion

Stigmatization can be seen in many different forms as a result of cultural differences at both individual and social levels [17]. In this study, the approach of eight national newspapers, representing different political views, to news about SUDs was analyzed. The media is an important source of information for society and plays a major role in shaping social perceptions, attitudes, and awareness [7, 18–20].

It has been determined that the media is associated with the attitudes of individuals in society toward mental health and mental disorders [19,21]. Therefore, it is extremely important to present news on mental health in an accurate and balanced manner. However, the media often contributes to misinforming the public about people with mental disorders and events related to these people [18,21].

Information on mental disorders is presented inadequately and negatively in the media. People with mental disorders are still

Table 4
Solution proposals in newspaper articles on substance use disorder.

Newspaper name/Solution proposals	News about Preventive Measures		News about treatment		News about rehabilitation	
	n	%	n	%	n	%
A	11	21,2	4	16,7	3	42,9
B	12	23,1	3	12,5	2	28,6
C	3	5,8	0	0,0	0	0,0
D	11	21,2	1	4,2	0	0,0
E	7	13,5	6	25,0	2	28,6
F	0	0,0	0	0,0	0	0,0
G	4	7,7	5	20,8	0	0,0
H	4	7,7	5	20,8	0	0,0
Total	52	100,0	24	100,0	7	100,0
Pearson Chi-Square	0,476		0,015		0,625	

Table 5
Analysis of visual materials used in the news.

Image type and content/Newspaper name	A		B		C		D		E		F		G		H		Toplam		Pearson Chi-Square
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Image type *																			
Real Photo	86	22,5	87	22,7	28	7,3	23	6,0	70	18,3	40	10,4	37	9,7	12	3,1	383	100,0	P = 0,000
Frosted photograph	6	13,6	15	32,6	0	0,0	1	2,2	10	21,7	5	10,9	5	10,9	4	8,7	46	100,0	P = 0,033
Archival image	56	32,0	40	23,3	2	1,2	8	4,7	18	10,5	3	1,7	23	13,4	23	13,4	172	100,0	P = 0,000
No image	20	12,3	14	8,6	0	0,0	65	46,0	25	15,3	8	4,9	6	3,7	14	9,2	152	100,0	P = 0,000
Image content																			
Individual's photo	49	23,4	61	29,2	9	4,3	10	4,8	33	15,8	27	12,9	12	5,7	8	3,8	209	100,0	P = 0,000
Institution (Hospital, police department vb)	55	90,2	0	0,0	2	3,3	1	1,6	0	0,0	0	0,0	1	1,6	2	3,3	61	100,0	P = 0,000
Incident location (Home, road, market, park)	25	21,9	17	14,9	5	4,4	8	7,0	21	18,4	14	12,3	20	17,5	4	3,5	114	100,0	P = 0,000
Victim's photo	34	29,3	30	25,9	6	5,2	4	3,4	20	17,2	13	11,2	7	6,0	2	1,7	116	100,0	P = 0,000
Image of the substance	1	4,5	2	9,1	4	18,2	1	4,5	7	31,8	0	0,0	5	22,7	2	9,1	22	100,0	P = 0,000

Table 6
Stigmatizing elements related to substance use disorder in newspaper news.

Words used to describe an individual with SUD	A		B		C		D		E		F		G		H		Total		Pearson Chi-Square
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Dependent	7	24,1	2	6,9	5	17,2	3	10,3	2	6,9	4	13,8	4	13,8	2	6,9	29	100,0	P = 0,004
User	2	66,7	0	0,0	0	0,0	0	0,0	0	0,0	1	33,3	0	0,0	0	0,0	3	100,0	P = 0,346
Substance or drug abuser	104	22,5	84	18,2	18	3,9	65	14,1	76	16,5	45	9,7	50	10,8	20	4,3	462	100,0	P = 0,000
Junkie	0	0,0	1	50,0	0	0,0	0	0,0	0	0,0	0	0,0	1	50,0	0	0,0	2	100,0	P = 0,523
Alcoholic	1	16,7	1	16,7	0	0,0	0	0,0	1	16,7	0	0,0	1	16,7	2	33,2	6	100,0	P = 0,330
Drunk	1	50,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	50,0	0	0,0	2	100,0	P = 0,549
Former abuser	1	50,0	0	0,0	0	0,0	0	0,0	0	0,0	1	50,0	0	0,0	0	0,0	2	100,0	P = 0,549
Treated abuser	2	50,0	0	0,0	0	0,0	1	25,0	1	25,0	0	0,0	0	0,0	0	0,0	4	100,0	P = 0,803
offender	47	21,8	50	23,1	5	2,3	25	11,6	38	17,6	22	10,2	19	8,8	10	4,6	216	100,0	P = 0,073
crime victim	15	25,9	14	24,1	3	5,2	5	8,6	11	19,0	5	8,6	2	3,4	3	5,2	58	100,0	P = 0,566
How the identity of the individual with SUD is expressed																			
full name	47	22,8	51	24,8	9	4,4	26	12,6	34	16,5	26	12,6	8	3,9	5	2,4	206	100,0	P = 0,000
abbreviated name	12	20,0	13	21,7	1	1,7	12	20,0	9	15,0	5	8,3	6	10,0	2	3,3	60	100,0	P = 0,800
Full name, abbreviated last	11	13,8	16	20,0	3	3,8	12	15,0	15	18,8	7	8,8	10	12,5	6	7,5	80	100,0	P = 0,689
Abbreviated first, full last	2	66,7	1	33,3	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	3	100,0	P = 0,687
No ID given	93	22,9	71	17,4	18	4,4	63	15,5	65	16,0	14	3,4	43	10,6	40	9,8	407	100,0	P = 0,000
stigmatizing content in the news																			
A substance user is dangerous	53	22,9	55	23,8	7	3,0	25	10,8	39	16,9	22	9,5	21	9,1	9	3,9	231	100,0	P = 0,039
Substance abuse is an incurable disease	10	66,7	2	13,3	0	0,0	1	6,7	0	0,0	1	6,7	1	6,7	0	0,0	15	100,0	P = 0,007
The individual with SUD should not take part in social life	114	40,9	51	18,3	15	5,4	14	5,0	38	13,6	19	6,8	20	7,2	8	2,9	279	100,0	P = 0,000

considered dangerous and there are many negative portrayals reflecting stigma. In Italy, 40% of newspaper coverage including homicides, suicides and other acts of violence showed a significant increase in the use of stigmatizing language when people with mental disorders were held responsible for the incident [20]. The related studies showed that the media's misinformation and harmful information about mental illnesses negatively affected the public's attitude toward mental illnesses [12,21]. This may feed society's misperceptions and prejudices about mental health.

The media has a great negative impact on the stigmatization about mental illnesses [21]. The results of some studies in the literature and the results of this study indicate that the media often presents mental illnesses as catastrophic news, creating widespread fear and anxiety in society [20,21].

Similarly, news about mental illnesses and substance use disorders presented in the media draw negative images and portray individuals as unpleasant, dangerous, and incompetent. People with a sick diagnosis or label are often portrayed as single, unemployed, dangerous, and even violent people without a social and economic identity [20–22], and stigma is supported by sensationalist headlines [18].

The findings of the present study support the conclusion in the literature that the media exhibits a stigmatizing attitude in the news about substance use disorders. The rate of stigmatizing content related to substance use disorders in the news analyzed was quite high (69.7%). The individual with SUDs was mostly defined as a "substance/drug abuser." In addition, it was found that these stigmatizing contents affected the social lives of individuals with substance use disorder, and expressions such as "should not be employed" and "should not get married" were important in this context [2].

However, with adequate and accurate news, the media can significantly reduce level of the current stigma toward individuals with mental disorders and thus facilitate their role in the family and society [18]. In a study, it was determined that participants who had better access to any media had better attitudes toward LGBT individuals and stigmatized these individuals less, indicating that media played an important role in reducing and preventing stigma [19].

Lack of knowledge and understanding of mental illness also contributes to stigmatization [18]. In this respect, the content presented by the media significantly affects the stigma related to people's attitudes and behaviors [19]. Accurate information on the treatment and rehabilitation of SUDs and other mental disorders can sensitize society, which can act to treat these disorders [18].

The results of this study showed that only 11% of the 753 news items were on solution proposals. This rate was quite low and indicated that solution proposals for mental illnesses were not sufficiently addressed by the media. In addition, when the content of the news on solution proposals was analyzed, it was determined that the highest rate (62.6%) belonged to preventive measures, but there was very little news on treatment and rehabilitation.

These results revealed that the media should adopt a more balanced approach to reporting on mental health. Including more informative, educational, and supportive content in the news about mental illnesses may increase the awareness of society on this issue and create positive effects. It is the responsibility of the media to endeavor to ensure that such reporting contributes positively to the overall mental health of the population [21].

Moreover, the fact that there was no significant difference between newspapers in their proposals for solutions raises concerns that the general approach of the media is similar across a broad spectrum. At this point, it may be an important step for the media to diversify the content of news on mental illnesses and emphasize suggestions that may have positive effects on mental health [20].

In cases where society cannot meet its need for access to health-related information from reliable and competent sources, it usually tries to meet this need by resorting to mass media. In this context, mass media plays a critical role in conveying health-related information to large masses and guiding individuals toward positive health behaviors. However, the media's presentation of inaccurate and derogatory content can lead to discrimination and negative labeling in society [20]. This can make it difficult for individuals to understand and assist these groups. If the media adopts a more sensitive approach to this issue and provides balanced and accurate information, it may help society to adopt a more conscious approach [2].

The study's concentration on the electronic archives of eight in Türkiye most prominent newspapers allowed to analyze thoroughly media representation in a specific context. By selecting well-established newspapers, the research taps into sources that likely have a significant impact on public opinion and discourse. Covering a full year (from January 1, 2022, to December 31, 2022), the study provided a comprehensive view of the media's portrayal of substance use disorder over an extended period. This duration was beneficial for capturing a range of perspectives and identifying any shifts or trends in media representation throughout the year. The utilization of electronic databases of major newspapers ensures a rich and accessible data source. This allows to use a systematic and replicable data collection method, which can be advantageous for future studies looking to compare or build upon these findings. Focusing on substance use disorder, this study addressed issues of high importance for both public health and social discourse [2]. This is a unique study to address substance use disorder and stigma, which are important issues for public mental health, together. It is thought that the striking results revealing the media portrayals on the subject will guide both the interventions to be implemented by health professionals and the steps to be taken by policy makers [7].

While the study focuses on digital media, its methodology and findings can serve as a benchmark for future studies that aim to compare different media types. This could enrich the understanding of how various media channels differently represent and influence public perception of health-related issues. A key strength of this study is its inclusion of newspapers from a range of ideological backgrounds. By analyzing media sources with differing editorial stances, the study provided a more holistic and balanced understanding of how substance use disorder is portrayed across the media spectrum in Türkiye. This approach helps in identifying biases, patterns, and differences in representation that might be linked to the ideological leanings of the newspapers [7]. It also enhances the study's credibility, as it avoids the pitfall of a one-sided analysis and ensures a more comprehensive exploration of the media landscape. Such a diverse approach is particularly valuable in understanding the complex ways in which media can influence public perception and discourse on sensitive health-related topics [21].

5. Conclusions

In conclusion, the findings of this study showed that the news about substance use disorder in digital newspapers often perpetuated stigma and reinforced negative social views. Promoting responsible reporting on substance use disorders is important to reduce stigma and provide support for people seeking help.

Therefore, training journalists in this field, as well as taking steps to reduce such stigmatizing content and avoiding the dissemination of such content by newspapers can positively affect the public's perception of mental illnesses and substance use disorders. Media organizations need to adopt specific guidelines and ethical standards for reporting on substance use disorders to provide more objective and informative reporting. Stigmatization and negativity that can harm individuals with substance use disorders can be reduced or prevented through simple changes in language. In this way, it can be ensured that the media uses a more sensitive language on substance use disorder and similar issues.

In order to better understand people and to reduce stigma with substance use disorders and other mental disorders, integrative and complementary multidisciplinary teamwork should be carried out to contribute to raising awareness and education of patients, their families, and journalists on this issue.

This study was based on news articles from the electronic archives of eight major newspapers in Türkiye. These newspapers may not represent the entire spectrum of media organizations in the country; hence, caution should be exercised in generalizing the findings. The key terms used in the data collection process might limit the study to a specific perspective. Additionally, the study focused only on the period between January 1, 2022, and December 31, 2022. The data of the study is limited to the data obtained from the eight newspapers constituting the sample and the news reports made in the date range in which the study was conducted.

Future studies can explore various avenues to overcome these limitations and gain a broader perspective. Examining different media channels, including television, social media, and other entertainment media, can enhance understanding of the representation of substance use disorder. Studies assessing the long-term effects of health news on audiences can contribute to a deeper understanding of the media's role in this context. Additionally, analyzing the representation of substance use disorder across different time periods can help understand the evolution of media frameworks over time. Besides, it is recommended to conduct studies that reveal the stigma experiences of individuals with substance use disorders resulting from media reports.

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Informed consent statement

Not applicable.

Data availability statement

Authors can be contacted regarding access to datasets related to the current study.

CRediT authorship contribution statement

Yasemin Bilişli: Writing – review & editing, Writing – original draft, Visualization, Supervision, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **İlkay Keser:** Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Ali Erdoğan:** Project administration, Conceptualization. **Fatma Çakmak:** Writing – review & editing, Methodology, Data curation. **Fahrettin Kayan:** Writing – review & editing, Formal analysis, Data curation. **Nimet Saygın:** Writing – review & editing, Writing – original draft, Resources.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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