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Item Type	Article
Authors	Raj, Sonika;Ghosh, Abhishek;Sharma, Babita;Goel, Sonu
Citation	Indian Journal of Psychiatry;63, pp. 575-83
Publisher	Wolters Kluwer
Download date	2026-06-08 03:05:24
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Link to Item	https://hdl.handle.net/10344/11093

Portrayal of mental illness in Indian newspapers: A cross-sectional analysis of online media reports

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ABSTRACT

Background: Media portrayal of mental illness may influence public stigma and service utilization.

Aim: This study aims to explore the overall tone and content of the news articles on mental illnesses in India.

Materials and Methods: This descriptive cross-sectional study was conducted on online English and Hindi news portals for articles which made reference to mental illness, published by local and national media sources between September 2019 and August 2020. The search was performed using location and news-only filters in the “Google” search engine; we used predefined search queries and selection criteria. A previously published checklist was used for the content analysis; it was done by two independent investigators.

Results: A total of 273 news reports met inclusion criteria (Hindi $n = 164$, English $n = 109$). Results showed that more than half (54.9%) had a positive tone. Nearly a third (30.8%) of these articles were stigmatizing in tone. Persons with mental illness were portrayed as violent, unreliable, and unpredictable. Uses of blanket terms (33.3%) such as mentally ill, mentally unstable, mentally retarded, and stigmatizing photographs (36.9%) were also common. Overall, Hindi media had a significantly better quality of reporting than the English language media. National media reports had a less negative and stigmatizing tone than local articles.

Conclusion: There is a need for a concerted attempt to improve the quality of media reporting of mental illness in India.

Key words: India, newspaper, persons with mental illness, stigma

INTRODUCTION

The National Mental Health Survey (2015–2016) reported that nearly 14% of the Indian population had suffered from

any mental health morbidity in their lifetime.^[1] Although the figure was a little less than the global prevalence of mental morbidity reported in the World Mental Health Survey, in terms of the absolute number, the magnitude of the problem in India was greater than most of the countries.^[2] The Indian survey also observed an overall treatment gap of 85%.^[3] The untreated mental health morbidity will contribute to the disability-adjusted life years (DALY) and years lived in disability; according to the sub-analysis of the Indian arm

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Submitted: 29-Jun-2021, **Revised:** 26-Jul-2021, **Accepted:** 28-Sep-2021, **Published:** 03-Dec-2021

Access this article online	
Website: www.indianjpsychiatry.org	Quick Response Code 
DOI: 10.4103/indianjpsychiatry.indianjpsychiatry_548_21	

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How to cite this article: Raj S, Ghosh A, Sharma B, Goel S. Portrayal of mental illness in Indian newspapers: A cross-sectional analysis of online media reports. *Indian J Psychiatry* 2021;63:575-83.

of the global burden of disease study, the contribution of psychiatric disorders to the total DALY has doubled since 1990.^[4] Previous research identified lack of knowledge of symptoms of mental health morbidities, awareness of treatment opportunities, perceived (or real) prejudice, and discrimination against people with mental illness as major drivers of the treatment gap.^[5] Media, by communicating recurrent messages that are being vicariously learned through observation, could play a significant positive (or negative) role in increasing awareness and reducing stigma of mental illness.^[6]

Previous studies on the media portrayal of mental illness from different countries revealed the following results: (a) the overall coverage on mental health has increased over the years,^[7] (b) the proportion of negative articles on mental illness might have reduced in the last couple of decades, but the tone of presentations may differ in common and severe mental illness,^[7,8] (c) despite a decreasing trend of negative reporting, several previous works showed a substantial proportion of news items still associate mental illness with violence and dangerousness, and use stigmatizing terms.^[9-11] This was striking because a number of these countries have formed national mental health commissions, and its anti-stigma initiatives target positive media coverage^[12] (d) discussions on mental health can have varying impacts in varied societal context^[13] (e) negative media reporting facilitates discrimination and reduces service utilization and social participation, whereas articles with positive stories may actually reduce stigma.^[14-17]

Research on the media portrayal of mental illness from India is lacking. In September 2019, the Press Council of India published a guideline for media reporting of suicide but there is no guideline for the reporting of mental illness.^[18] Moreover, in spite of the guideline on suicide reporting, two recent publications found that more than 80% of the news articles deviated from at least one media reporting guidelines.^[19,20] These findings indicate a preponderance of a negative discourse in Indian media on mental health issues. We hypothesize that in the absence of any reporting guidelines and targeted interventions, Indian media reporting on mental illness may be dominated by negative coverage. However, we do not have any systematically collected published data from India on the quality of media reporting on mental illness. There was one published study that had explored the extent of reporting of mental illness from a few selected newspapers and assessed only the perceived language and tone of the newspaper article.^[21] Therefore, Indian research in this area is limited.^[22] The overarching aim of this study was to explore the newspaper portrayal of mental illness in India. The specific objectives were to assess: (a) the overall tone and content of the news articles, (b) differences in the tone of English and Hindi online media, (c) other variables (such as local versus national news) related to the content and tone of articles.

MATERIALS AND METHODS

Settings

This descriptive cross-sectional study was conducted on online English and Hindi news portals for articles which made reference to mental illness and are published from September 2019 to August 2020.

We explored digital media for a period of 1 year. The reasons for choosing online over online media were as follows: (a) most of the best-selling newspapers in India have a digital version (e-paper). Hence, an online search is likely to reveal all these articles, in addition to the exclusive online media reports. Therefore, it is likely to be more inclusive; (b) COVID-19 pandemic has resulted in nearly 75% decline in the newspaper sales in India, and digital media has become a preferred option^[23] (c) India has a growing number of internet users, and it is second largest in the world.^[24]

Search strategy

A search was performed on the “Google” search engine using the following search terms: “mental illness,” “mentally ill,” “mentally sick,” “schizophrenia” “schizophrenic,” “psychosis,” “psychotic,” “madness,” “bipolar disorder,” “psychiatric disorders” and “depression.” For Hindi keywords used were: “*mansik chikitsa*,” “*mansik samasya*,” “*mansik rog*,” “*mansik rogi*,” “*mansik bimari*,” “*mansik santulan*,” “*tanaav*,” “*schizophrenia*,” “*depression*,” and “*pagalpan*.”

The location filter was set to include articles of India provenance only. The other filters used were “only news,” “Customized date range (September 1, 2019, to August 30, 2020)” “Relevance by Date,” and “Hide Duplicates.” We opted for “Google” because the options of the date filter on “Google News” search engine was unavailable. The search was conducted on the first 10 pages (100 hits) for the main keywords “mental illness” and “*mansik chikitsa*” because beyond that, the news articles are unlikely to be of relevance and have an impact on public perception. For the rest of the keywords, the first 30 hits per search term were included as beyond that, we could only find duplicate or irrelevant reports [Figure 1]. We also used the term “*psychiatry*” in Hindi but could not find any of the reports, so removed that from the list. SG and BS performed the search for the English and Hindi words, respectively. Therefore, inter-rater agreement was not a concern.

Inclusion and exclusion criteria

All news reports which mentioned specific instances of mental illness were included. Articles that contained expert opinion on the issues related to mental illness, including discussion of high-risk groups, research findings, raising awareness about mental health or commentary were also included. The news reports which used a search term peripherally and, in a context, unrelated to mental health like

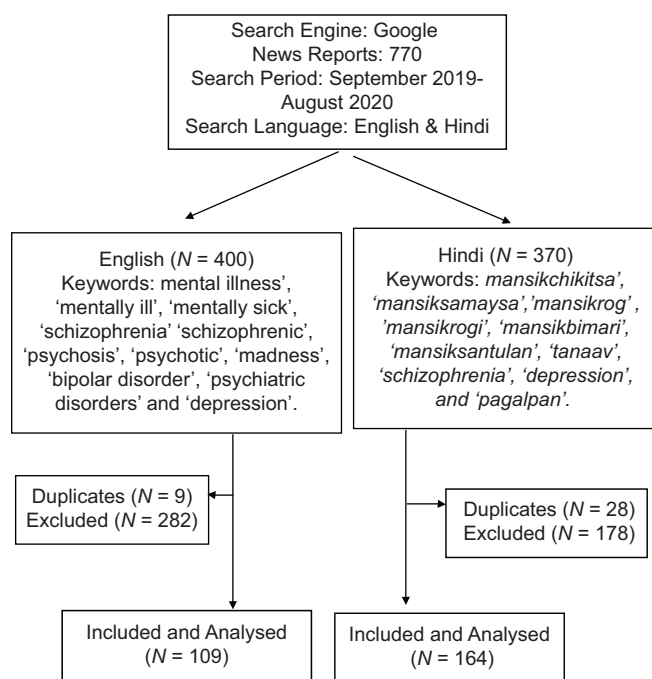


Figure 1: Search strategy and screening

“economic depression,” “tropical depression” were excluded. As suggested in the literature, substance use disorders, neurodevelopmental and neurodegenerative diseases were not included, as these present a different set of concerns regarding public attitudes and understanding of the mental illness.^[25] The articles in which the search term appeared as the title of a film were also excluded. For television channels, only news reports were included, and video footage was not assessed. All International news related to the topic of interest on Indian news portals were included; however, the ones on global news portals were excluded.

Data extraction

Data collection was done by two independent investigators who are qualified public health professionals and psychiatrists with prior experience of conducting such studies.^[20] Initially, the following descriptive information was extracted from reports meeting the inclusion criteria: The language of the report (English/Hindi), source (Local/National/International), name of the portal, type of media (newspaper/magazines/Television channel), date of the story, type of media (only online or both print and online platform), number of sentences, type of mental illness discussed in the report (non-specific/depression and or anxiety or stress-related/schizophrenia or psychosis/multiple illnesses), and the category of reporting. We classified news articles as “national” if the online publication was for the national version of the newspaper. Classification as “local” was done if the publication was for the regional or local page of the national newspaper (e.g., Chandigarh Times for the Times of India). The category of reporting was divided into three classes as suggested by^[26] (a) Individual

case class (reporting specific incidents of the person with mental illness), (b) Epidemiological fact class (providing information about research on mental illness or statistics, and (c) Expert opinion class (raising awareness on mental illness, supporting services).

Each report was evaluated based on the checklist and was assigned a series of codes similar to the study conducted by Whitley and Wang.^[7] The questions looked for are as follows:

(1) “Is the overall tone optimistic/positive about mental health (like progress, resilience, recovery?” (yes, no, neutral); (2) Does the article contain significant negative tones (e.g., death, defeat, loss, self-harm, unpredictability, inability to control one’s life, vulnerability)? (3) “Is recovery/rehabilitation a major theme?” (yes, no, neutral); (4) “Is the story stigmatizing in tone and/or content?” (yes, no, neutral); (5) “Is danger, violence, or criminality or legal issues linked negatively to mental illness?” (yes, no, neutral); (6) “Is a shortage of resources or poor quality of care a theme?” (yes, no, neutral); (7) “Are mental health experts quoted in the text either directly or paraphrased?” (not quoted, quoted positively, quoted negatively, quoted mixed); (8) “Are mental health interventions (e.g., medicine or therapy) discussed in the story?” (not discussed, discussed positively, discussed negatively, discussed mixed). Along with the content analysis, the theme of the stigma of the story was also identified. The themes were categorized *a priori* as vulnerability, unpredictability, violence, and unawareness about the surroundings. Vulnerability portrayed the person as incompetent and unable to control their own life. Unpredictability, an inability to account for one’s own actions, and violence as dangerousness to self or others.^[27]

To make it more inclusive, we also added few more questions based on the guidelines for responsible reporting of suicide by the WHO,^[28] modified according to our topic of interest. (9) Is a third-party interviewed? (yes/no); (10) if yes, were the following people interviewed? (Person with mental illness, Family/friends of people with mental illness, mental health expert, members of the general public); (11) is the article focused on one topic (i.e., Issue-based) like mental illness mentioned in the context of suicide? (12) Is the article focused on a single person with mental illness (i.e., Individual-based)? (yes, no); (13) If yes, is the identity of the person disclosed? (yes, no); (14) Are the sufferings of the person living with mental illness mentioned? (yes, no); (15) Is there a use of blanket terms such as “mentally ill,” “mentally unstable,” or “mentally retarded” in the news report? (yes, no);^[29] (16) Is the contact information of support services mentioned? (yes, no); (17) Is there a mention of mental illness-related statistical data? (yes, no); (18) Is there a mention of any social issues or inequalities? (yes, no).

Along with above-mentioned characteristics, the presence and nature of representational photographs were also assessed. The engagement of news reports in terms of users' comments was also identified.

Compliance with ethical standards

There were no potential conflicts of interests that are directly or indirectly related to the research. Our research does not involve human participants and or animals. Informed consent is not applicable as there is no human participants involved in our research.

Data analysis and quality assurance

The tone and content of each news report were assessed under two domains-positive and negative characteristics using pre-assigned codes and categories.^[26] Besides, online meetings were also held regularly among investigators to seek agreement for minor doubts that arose while coding. The news links of individual reports were added to the separate word document with each included report given the same number as on the SPSS sheet to facilitate cross-checking and to maintain data quality. The codes were entered directly into IBM SPSS Statistics for Windows, Version 23.0. (Armonk, NY: IBM Corp.) for analysis of the content. Descriptive statistics were used to summarize the data. Pearson's Chi-square was used to compare news reports across English and Hindi languages and the source of the report (local, National). Statistical significance was set at 0.05.

RESULTS

A total of 273 news reports met inclusion criteria with 109 and 164 reports were in English and Hindi language, respectively. Among those, the majority was from newspapers portals (87.2%); more than half were from national sources (56.4%) and from news agencies which offer only online platforms (58.6%). One hundred sixty-six (60.8%) reports belonged to the individual case class followed by the epidemiological fact class (32.2%). Fifteen news reports were based on the studies published in national and international journals. Almost half of the reports had no mention of any specific psychotic disorder (46.2%), followed by depression and/or anxiety or stress-related articles. Representational photographs were present in 40.8% of the articles [Table 1].

Positive characteristics

More than half of the news articles had a positive tone (54.9%). Almost three-fourths were with recovery or rehabilitation as a major theme (33.7%), had mental health experts positively quoted (36.3%) in the text, and discussed mental health interventions positively (34.4%). Mental illness-related statistical data was mentioned in one-fourth (27.1%) of the reports. Only 8% had mention of contact information of support services [Table 2]. The few examples of excerpts from news portals that depict a positive/rehabilitative tone are as follows:

Table 1: Descriptive statistics of news reports on mental illness

Characteristics	Total (n=273), n (%)
Language	
English	109 (39.9)
Hindi	164 (60.1)
Type	
Newspaper	238 (87.2)
TV channels	32 (11.7)
Magazines	3 (1.1)
Source	
Local	102 (37.4)
National	154 (56.4)
International	17 (6.2)
Media	
Online	160 (58.6)
Online and print	113 (41.4)
Number of sentences	
<11	57 (20.9)
11-20	125 (45.8)
>20	91 (33.3)
Category of reporting	
Individual case class	166 (60.8)
Epidemiological fact class	88 (32.2)
Expert opinion class	19 (7.0)
Type of mental illness	
Nonspecific	126 (46.2)
Schizophrenia/psychosis	30 (11)
Depression and or anxiety/stress related	73 (26.7)
Others	44 (16.1)
Representational photography present	
Yes	111 (40.7)
User comments present	
Yes	17 (6.2)
Positive	15 (88.2)
Negative	2 (11.8)
Number of users comments	
<10	13 (76.4)
10-50	2 (11.8)
>50	2 (11.8)

There are thousands of destitute and non-criminal lunatics out there on the streets. I appeal to the NGOs and the government to cope with the requirements of food, clothing, medicine, shelter and difficulties involved in ferry the patient to his native place, "Irot Tanti, secretary, ATTSA, Doomdooma unit, told The Telegraph." (The Telegraph, Jan 17, 2020) - Positive tone.

"As they say, what doesn't kill you makes you stronger... We all have that strength, some of us just give up before that strength or the revelation of that strength within us comes to us," said Shama. She calls it her 'new birth', after recovering from the illness." (Telangana Today, June 2, 2020) - Positive tone.

"A novel initiative to trace close relatives of 51 destitute and mentally ill persons, who were rescued and subsequently accommodated in the home run by Anbalayam in the city, has yielded positive results." (The Hindu, November 20, 2019) - Rehabilitation.

Negative characteristics

Among individual-based articles, almost half had disclosure of a person's identity (45.5%) through name, age, occupation, or

Table 2: Language-wise distribution of characteristics in news reports on mental illness

Characteristics	English (n=109), n (%)	Hindi (n=164), n (%)	Total (n=273), n (%)	χ^2 /Fisher exact test value (df)	P ^{#,a}
Issue-based report					
Yes	56 (51.4)	67 (40.9)	123 (45.1)	2.9 [#] (1)	0.1
Individual-based report					
Yes	55 (50.5)	79 (48.2)	134 (49.1)	0.13 [#] (1)	0.80
Third-party interviewed					
Yes	19 (17.4)	109 (66.5)	128 (46.9)	63.2 [#] (1)	<0.001
Third party	n=19	n=109	n=128		
Person with mental illness	3 (15.8)	76 (69.7)	79 (61.7)	23.0 ^a (3)	<0.001
Family and friends	7 (36.8)	10 (9.2)	17 (13.3)		
General public	4 (21)	6 (5.5)	10 (7.8)		
Others	5 (26.3)	17 (15.6)	22 (17.2)		
Representational photography present					
Yes	92 (84.4)	19 (11.6)	111 (40.7)	143.9 [#] (1)	<0.001
Positive characteristics					
Tone positive					
Yes	50 (45.9)	100 (61)	150 (54.9)	6.04 [#] (2)	0.05
Recovery/rehabilitation as a theme					
Yes	42 (38.5)	50 (30.5)	92 (33.7)	3.03 [#] (2)	0.22
Shortage of resources or poor quality of care as a theme					
Yes	21 (19.3)	21 (12.8)	42 (15.4)	3.5 ^a (2)	0.15
Mental health expert quoted					
Quoted positively	34 (31.2)	65 (39.6)	99 (36.3)	9.8 ^a (1)	0.01
Mental health interventions discussed					
Discussed positively	28 (25.7)	66 (40.2)	94 (34.4)	13.9 ^a (3)	<0.001
Mental illness-related statistical data					
Yes	32 (29.4)	42 (25.6)	74 (27.1)	0.46 ^a (3)	0.49
Contact information of support services					
Yes	2 (1.8)	20 (12.2)	22 (8.1)	9.4 [#] (1)	0.002
Social issues/inequalities mentioned					
Yes	29 (26.6)	85 (51.8)	114 (41.8)	17.1 [#] (1)	<0.001
Sufferings of people living mental illness mentioned					
Yes	30 (27.5)	27 (16.5)	57 (20.9)	4.8 ^a (1)	0.03
Negative characteristics					
Tone negative					
Yes	43 (39.4)	47 (28.7)	90 (33.3)	6.2 [#] (2)	0.04
Stigmatizing in tone and/or content					
Yes	45 (41.3)	39 (23.8)	84 (30.8)	9.4 [#] (1)	0.002
Types of stigma	n=45	n=39	n=84		
Vulnerability	18 (40)	10 (25.6)	28 (33.3)	6.6 ^a (2)	0.08
Asocial/failure	3 (6.7)	2 (5.2)	5 (6)		
Unpredictability	11 (24.4)	5 (12.8)	16 (19)		
Violent/dangerousness	13 (28.9)	22 (56.4)	35 (41.7)		
Use of blanket terms					
Yes	70 (64.2)	21 (12.8)	91 (33.3)	77.8 [#] (1)	<0.001
Identity of person disclosed	n=55	n=77	n=134		
Yes	46 (83.6)	15 (19.5)	61 (45.5)	54.6 [#] (1)	<0.001
Nature of photograph	n=92	n=19	n=111		
Stigmatizing	36 (39.1)	5 (26.3)	41 (36.9)	-1.1 (1)	0.29

[#]Chi square test, ^aFisher's exact test

gender. Almost three-fourths of the news report (30.8%) were stigmatizing in tone/content with the use of blanket terms such as mentally ill, mentally unstable, mentally retarded (33.3%), and with stigmatizing photographs (36.9%). 41.7% and 33.3% of all stigmatizing reports showed mentally ill people as violent and vulnerable [Table 2]. A few excerpts from news portals are given below, which shows stigmatizing tone:

"A mentally ill woman, unaware of her husband's death has spent three days with the dead body here at Nizamabad." (The Hans India, May 14, 2020) - Asocial/Failure.

"A man with mental illness was seen roaming on roads wearing used Personal Protective Equipment (PPE) at Lokhora area in Guwahati, Assam, on Thursday evening." (India Today, May 15, 2020) - Vulnerability.

"In a horrific incident, a 50-year-old, mentally ill man, allegedly killed his wife and later hanged himself at Kandukur near here." (The Indian Express, February 25, 2020) - Violence.

"Mentally-ill man fatally hacks 4 kin, mother manages to escape." (The New Indian Express, April 8, 2020) - Violence.

“A 26-year-old man armed with a knife was arrested on Monday after he allegedly tried to cross a barricade to enter Parliament House from Vijay Chowk. Police said the man appeared a bit ‘mentally disturbed’ and claimed that he wanted to be heard on his views about meat and liquor ban.” (Hindustan Times, September 12, 2019) - Unpredictability.

Comparison of reports based on Language

When the language-wise comparison of news reports was made, there was no expert opinion article in Hindi. The positive characteristics such as positive tone (61%), positive quotation by mental health experts (39.6%), positive discussion of mental health interventions (40.2%), and provision of contact information of support services (12.2%) were higher in Hindi reports. All these differences were found to be statistically significant. Similarly, negative characteristics such as stigmatizing tone of the report (41.3%), use of blanket terms (64.2%), and disclosure of the identity of the person (83.6%) were found to be significantly higher in English news reports [Table 2].

Comparison of reports based on source

As shown in Table 3, local sources had more articles (60.8%) focusing on specific incidents of the person with mental illness, and nearly half (49%) of them were with representational photographs. Negative characteristics such as stigmatizing tone (45.1%), use of blanket terms (52%), and disclosure of the identity of persons with mental illness (50%) were significantly higher in local sources as compared to National reports. Among positive variables, National sources had a significantly higher proportion of articles with mental illness-related statistical data (39%).

DISCUSSION

To the best of our knowledge, ours is the first analysis of media portrayal of mental illness from India. The strengths of our study lie on (a) systematic data collection by applying *a priori* selection criteria, a well-articulated search strategy, and using a questionnaire with established credibility.^[7,27] Moreover, we added new dimensions to the checklist such as readers’ participation and engagement^[30] (b) data extraction was done by researchers with experience and expertise^[20] (c) analyzing media reports of 1 year period, and (d) exploring both English and Hindi media, thus covering a substantial majority of newspapers in circulation. All these would have made our results reproducible, generalizable, and reliable.

The exploration of digital media articles revealed an overall positive tone in more than half of the reports. In light of the previous study findings, our results are encouraging-the newspaper reports of a nationally representative sample from New Zealand showed positive depiction only in 27% of articles.^[27] The positive tone detected in the Canadian study of print and online media was further less (21%).^[7] The New Zealand’s report was published nearly two decades ago,

and the report from Canada showed an improving trend of media reporting in the last decade. Hence, a more positively oriented reporting in our study might be a reflection of better awareness of mental illness among media professionals. A longitudinal study could have given a better insight. Another reason for a better media representation could have been a function of a relatively lesser proportion of articles depicting schizophrenia and psychosis, which have been shown to draw more negative attitudes.^[31] We also would like to recognize the methodological differences between the previous and our study. The study from New Zealand analyzed print media clippings (not full reports) published in 1 month and the Canadian authors analyzed both print and electronic media over an 11-year period. Among the other positive characteristics, one in three reports mentioned recovery or rehabilitation, positively discussed mental health interventions, and positively quoted mental health professionals-represented in a higher proportion of media pieces than the Canadian articles.^[7] The portrayal of mental illness as treatable has been shown to decrease the desire to social distance, enhance the belief of effectiveness of treatment, and reduce the tendency to discriminate against people with mental illness.^[32] However, a substantially lesser proportion of Indian media (15% vs. 32%) would report on limited mental healthcare resources. Given the 85% treatment gap for mental illness, underreporting of limited resources and poor quality of care in Indian media is intriguing.^[3] This could be explained by the fact that more than 60% of the Indian media reports were based on individual cases, and nearly 33% were on the epidemiology of mental illness. Neither of these classes is likely to focus on the scarcity and quality of mental healthcare.

Almost one in three media reports analyzed in our study revealed either a negative or stigmatizing tone or content. These figures were relatively worse than the Canadian reports.^[7] Among the stigmatizing themes, more than 70% reports portrayed patients with mental illness as dangerous and vulnerable (i.e., incompetent and unable to control their own life). These proportions were quite similar to the media analysis from New Zealand.^[27] The desire to social distance from person with mental illness increases with perceived dangerousness and unpredictability.^[33] Media items dominated by these negative themes may worsen levels of personal and public stigma. Using blanket and stigmatizing terms such as “lunatics,” “mentally ill” were also reported in one-third of our newspaper articles. These terms broadly coincide with the stigmatizing mental health labels reported elsewhere.^[34] Stigmatizing photographs depicted in more than third of the articles might add to the negative representation. Previous literature showed that a psychiatric label was associated with a higher negative attitude toward the individual with mental illness.^[31] Nearly half of the articles disclosed the identity of the individual with mental illness. This is very worrisome and directly contravenes the National Mental Health Care Act (MHCA)

Table 3: Source-wise distribution of characteristics in news reports on mental illness

Characteristics	Local (n=102), n (%)	National (n=154), n (%)	Total (n=256), n (%)	χ^2 /Fisher exact test value (df)	P ^{#, a}
Issue-based report					
Yes	27 (26.5)	85 (55.2)	112 (43.8)	20.5 [#] (2)	<0.001
Individual-based report					
Yes	62 (60.8)	61 (39.6)	123 (48)	11.2 [#] (2)	<0.001
Third-party interviewed					
Yes	55 (53.9)	66 (42.9)	121 (47.3)	3.6 [#] (2)	0.08
Third-party	n=55	n=66	n=121		
Person with mental illness	36 (65.5)	42 (63.6)	78 (64.5)	0.02 [#] (8)	0.88
Family and friends	5 (9.1)	7 (10.6)	12 (9.9)		
General public	5 (9.1)	4 (6.1)	9 (7.4)		
Others	9 (16.3)	13 (19.7)	22 (18.2)		
Representational photography present					
Yes	50 (49)	49 (31.8)	99 (38.7)	7.6 [#] (1)	0.005
Positive characteristics					
Tone positive					
Yes	52 (51)	86 (55.8)	138 (53.9)	0.5 ^{a, #} (2)	0.44
Recovery/rehabilitation as a theme					
Yes	31 (30.4)	52 (33.8)	83 (32.4)	0.3 [#] (4)	0.57
Shortage of resources or poor quality of care as a theme					
Yes	15 (14.7)	26 (16.9)	41 (16)	0.21 [#] (4)	0.64
Mental health expert quoted					
Quoted positively	36 (35.3)	53 (34.4)	89 (34.8)	0.02 [#] (6)	0.88
Mental health interventions discussed					
Discussed positively	26 (25.5)	58 (37.7)	84 (32.8)	4.1 [#] (6)	0.04
Mental illness-related statistical data					
Yes	10 (9.8)	60 (39)	70 (27.3)	26.2 [#] (6)	<0.001
Contact information of support services					
Yes	7 (6.9)	15 (9.7)	22 (8.6)	0.6 [#] (2)	0.42
Social issues/inequalities mentioned					
Yes	47 (46.1)	65 (42.2)	112 (43.8)	0.37 [#] (2)	0.54
Sufferings of people living mental illness mentioned					
Yes	24 (23.5)	24 (15.6)	48 (18.7)	2.54 [#] (2)	0.11
Negative characteristics					
Tone negative					
Yes	47 (45.1)	39 (25.3)	86 (33.6)	11.8 [#] (4)	<0.001
Stigmatizing in tone and/or content					
Yes	46 (45.1)	36 (23.4)	82 (32)	13.2 [#] (2)	<0.001
Type of stigma					
Vulnerability	19 (41.3)	8 (22.2)	27 (33)	6.5 ^a (3)	0.08
Unawareness	4 (8.7)	1 (2.8)	5 (6.1)		
Unpredictability	7 (15.2)	12 (33.3)	19 (23.1)		
Violent	16 (34.8)	15 (41.7)	31 (37.8)		
Use of blanket terms					
Yes	53 (52)	35 (22.7)	88 (34.4)	23.2 [#] (2)	<0.001
Identity of person disclosed	n=62	n=61	n=123		
Yes	31 (50)	16 (26.2)	47 (38.2)	7.3 [#] (2)	0.006
Nature of photograph	n=50	n=49	n=99		
Stigmatizing	17 (34)	20 (40.8)	37 (37.4)	0.4 (8)	0.48

[#]Chi square test, ^aFisher's exact test

of India, which upholds the rights of persons with mental illness to privacy and confidentiality.^[35] Unfortunately, media reporting does not fall under the ambit of MHCA, and it would make it difficult to hold the media houses accountable.

Overall, the negative characteristics were significantly more in the English than Hindi media. Hindi digital media also had significantly higher positive tone and content (e.g., effectiveness of treatment, quoting experts,

providing information of contact services, third-party interview). The results were in contrast to our findings on media analysis of suicide reporting.^[20] Some of the differences could be explained by the convenience of conducting an interview in Hindi with a person with mental illness, their family members, and even local mental healthcare experts. Social participation and inclusion of persons with mental illness and their families have been shown to improve the unity and acceptance and reduce discrimination.^[36] Research on citizen journalism, i.e., journalism involving ordinary

community members producing media pieces about topics and issues affecting them and their communities showed to portray a positive tone and hope in mental illness.^[37] Therefore, the greater involvement of the third party (patients, families, and mental health experts) in Hindi media reports may also explain the lesser negative tones than in English newspapers.

Comparison of local and national media reports revealed some important results: Local news is dominated by reporting of individual cases, whereas the national news is more issue-based, providing more emphasis on mental health statistics and treatment of mental illness. National news seems to demonstrate less negative tone and stigmatizing content. The type of reporting may reflect varying editorial needs of local and national level media. Better reporting quality of national reports may suggest better editorial quality, more professionalism, awareness of the mental illness, and standards of reporting.^[38,39]

Our study has the following limitations - (a) we have restricted our analysis to online media reports; hence, our results may not be extrapolated to print media, (b) we have analyzed the Hindi and English media, but there are 22 official languages in India; therefore, our results must not be generalized as reports from Indian media; however, we would like to note that the highest number of newspaper was published in Hindi and English; Hindi newspapers dominated the circulation, followed by the English language newspapers,^[40] (c) our study gives media portrayal over one year period; being a cross-sectional study, we could not comment on any trends, (d) the search words were not the exact translations for the English and Hindi language; these are analogs words with similar meaning (e.g., “insanity” as “pagalpan”). The Hindi equivalents were based on by the authors’ experience and subjective judgment, and (e) finally, although the online media may have greater and quicker reach to the readers, its credibility may be less than the print media; moreover, areas with poor internet connectivity or access could still be reached by the print media. Therefore, future studies should explore the portrayal of mental illness in the print media as well.

CONCLUSION

In sum, analysis of online media portrayal of mental illness in our study revealed both positive and negative tones in newspaper reports. Hindi media has a better quality of reporting than the English language media. National media reports have a less negative and stigmatizing tone than local media articles. Media reporting is one of the many facets of stigma reduction strategies. Our results showed a need for a concerted attempt to improve the quality of media reporting of mental illness in India. This should include-(a) organizing seminars or including reporting of mental illness in the schools of journalism, (b) online education course for

aspiring or professional journalists, and (c) drawing up a comprehensive guideline and checklist for reporting mental illness in the media.^[41,42] The Indian Psychiatric Society and other professional organizations working with persons with mental illness must communicate to the Ministry of Information and Broadcasting and advocate the need to have a comprehensive plan to improve the quality of media reporting.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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