



Assessing the quality of media reporting of suicide news in India against World Health Organization guidelines: a content analysis study of nine major newspapers in Tamil Nadu

Journal:	<i>Australian and New Zealand Journal of Psychiatry</i>
Manuscript ID	ANP-2017-00379.R2
Manuscript Type:	Research
Date Submitted by the Author:	n/a
Complete List of Authors:	Armstrong, Gregory; University of Melbourne, Centre for Mental Health, Melbourne School of Population and Global Health Vijayakumar, Lakshmi; Voluntary Health Services Hospital, Department of Psychiatry Niederkrotenthaler, Thomas; Medical University of Vienna, Center for Public Health, Institute for Medical Psychology; CDC, NCIPC Jayaseelan, Mala; Voluntary Health Services Hospital, Department of Psychiatry Kannan, Ramya; The Hindu Pirkis, Jane; The University of Melbourne, Centre for Mental Health, Melbourne School of Population Health Jorm, Anthony; University of Melbourne, Centre for Mental Health, Melbourne School of Population Health
Keywords:	India, suicide, media reporting, content analysis, guidelines

SCHOLARONE™
Manuscripts

Assessing the quality of media reporting of suicide news in India against World Health Organization guidelines: a content analysis study of nine major newspapers in Tamil Nadu

Gregory Armstrong^{1*}, Lakshmi Vijayakumar^{2,3}, Thomas Niederkrotenthaler⁴, Mala Jayaseelan², Ramya Kannan⁵, Jane Pirkis¹, Anthony F Jorm¹

¹ Centre for Mental Health, The University of Melbourne, Melbourne, Australia

² Department of Psychiatry, Voluntary Health Services, Chennai, India

³ SNEHA Suicide Prevention Centre, Chennai, India

⁴ Centre for Public Health, Medical University of Vienna, Vienna, Austria

⁵ The Hindu, Chennai, India

Corresponding author:

Gregory Armstrong, Centre for Mental Health, Melbourne School of Population and Global Health, University of Melbourne, 207 Bouverie St, Carlton, Victoria 3010, Australia. Email:

g.armstrong@unimelb.edu.au

Abstract

Objectives

Suicide rates in India are among the highest in the world, resulting in an estimated 250,000 suicide deaths annually. How the media communicates with the Indian public on the topic of suicide has thus far gone without sufficient scrutiny. The objective of our study was to assess the quality of newspaper reporting of suicide-related news in India against World Health Organization (WHO) suicide reporting guidelines.

Methods

We used content analysis to assess the quality of suicide reporting against WHO guidelines in nine of the most highly read daily newspapers in the southern state of Tamil Nadu between June-December 2016. Five of the nine newspapers under review were in the top 20 most circulated daily newspapers in the country.

Results

A total of 1,681 suicide articles were retrieved. The mean number of suicide articles per day per newspaper was 0.9 and 54.5% of articles were 10 sentences or less. The vast majority (95.9%) of articles primarily focused on reporting specific suicide incidents. Harmful reporting practices were very common (for example, a detailed suicide method was reported in 43.3% of articles) while helpful reporting practices were rare (for example, just 2.5% gave contact details for a suicide support service).

Conclusions

We observed that a daily diet of short and explicit suicide-related news was served up to readers of newspapers. Attempts should be made to understand the perspectives of media professionals in relation to suicide reporting, and to devise strategies to boost the positive contribution that media can make to suicide prevention.

1
2
3 **Keywords**

4 India; suicide; media reporting; content analysis; guidelines
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Background

Suicide is a major global health problem. Worldwide, over 800,000 suicide deaths occur every year, and Asia accounts for up to 60.0% of suicide deaths (World Health Organization, 2014; Beautrais, 2006). Suicide rates in India are among the highest in the world with an estimated suicide death rate of 21 per 100,000 (*cf.* global suicide rate 11.4/100,000), equating to over 250,000 suicide deaths annually with far-reaching social, emotional and economic consequences (World Health Organization, 2014). There are more suicide deaths in India each year than AIDS-related and maternal deaths combined (Patel et al., 2012), yet suicide attracts relatively less public health attention. In response to the magnitude of this issue, a public health approach to suicide prevention is gaining momentum in India, yet the manner by which the media communicates with the Indian public on the topic of suicide has thus far gone without scrutiny (Ponnudurai, 2015).

One of the few promising suicide prevention strategies at the population level is responsible media reporting of suicides (Zalsman et al., 2016; Turecki and Brent, 2016). Given the influence of mass media on public opinion, it is highly likely that media reporting will have a significant impact on the public's awareness and attitudes about suicide and its prevention (Niederkröthaler et al., 2014; Klimes-Dougan et al., 2016). There are concerns that media reporting can be a source of misinformation, such as by offering simplistic, monocausal explanations that imply suicide is a solution to immediate triggers rather than being correlated with a complex array of proximal and distal risk factors (for example, poor mental health, child sex abuse and cultural/religious attitudes towards suicide) (Hawton and van Heeringen, 2009; Beautrais A et al., 2008). Mass media reports may also stigmatise suicide and reduce help seeking (Niederkröthaler et al., 2014), and can have insufficient consideration for persons bereaved by suicide deaths.

Furthermore, numerous studies have demonstrated that some media reports of suicide incidents can be a stimulus for imitation acts by vulnerable people (Pirkis et al., 2006; Niederkröthaler et al., 2010; Stack, 2005). Evidence suggests that the imitation risk is exacerbated by sensational and graphic reporting practices, such as by publishing a detailed description of the suicide method (Niederkröthaler et al., 2010), and mass media can also be an unwitting vehicle for disseminating new suicide methods (Cheng et al., 2017). Strategies to address this phenomenon have been associated with reduced suicide rates (Zalsman et al., 2016). Furthermore, research from Austria observed that suicide rates reduced following media reports about people who "mastered" their suicidal crisis and implemented alternative actions to suicidal behaviour (Niederkröthaler et al., 2010). Such articles emphasised positive coping strategies and supports that can help to prevent suicide.

Given the above, the World Health Organization (WHO) and International Association for Suicide Prevention (IASP) have developed guidelines for media reporting of suicide, primarily for use in countries that don't already have their own national guidelines (Department of Mental Health and Substance Abuse, 2008). However, implementation of the WHO guidelines has been varied and anecdotal evidence suggests a high level of graphic and explicit media reporting of suicide in Asia (Beautrais A et al., 2008; Fu et al., 2011; Ju Ji et al., 2014; Fu and Yip, 2009), including in India where an increasingly literate rural population is driving the world's fastest-growing newspaper market (Ramadas et al., 2014; Beautrais, 2006; Chandra et al., 2014; The Economist, Sept 23rd 2010).

The objective of this study was to assess the quality of newspaper reporting of suicide-related news in India against WHO suicide reporting guidelines. Due to the large number of languages across India and the prohibitive level of resources required to fund a study with a broad national spread of

1
2
3 newspapers published in a range of languages, we elected to undertake a comprehensive study of
4 newspaper reporting in one state. We chose Tamil Nadu, which lies in the southernmost part of the
5 Indian Peninsula and is the sixth most populous state in India with a population of 72 million. Tamil
6 Nadu consistently has one of the highest suicide rates in India (22.8/100,000) resulting in 15,777
7 recorded suicide deaths in 2015 (i.e. 43 suicide deaths per day)(National Crime Records Bureau,
8 2015). The approach of focusing on one state also allows us to comprehensively track changes in
9 media reporting in this state following upcoming efforts to engage with the media on this topic.

10 11 12 **Methods**

13 As part of the Suicide in Indian Media (SIM) project, we undertook a content analysis study of
14 articles reporting suicide-related news in nine of the ten most highly read vernacular and English-
15 language daily newspapers in Tamil Nadu over the 7-month (i.e. 214 day) period between 1st June
16 and 31st December 2016. The nine newspapers, all in the top 10 most highly read newspapers in the
17 state, collectively have an estimated average daily readership of over 16,000,000 people in Tamil
18 Nadu alone (Media Research Users Council, 2017). Five of the nine newspapers under review are in
19 the top 20 most circulated daily newspapers in the country (Audit Bureau of Circulations, 2015),
20 giving the findings relevance beyond Tamil Nadu.

21
22
23 To source the articles, the hardcopies of all 1,926 (9 newspapers x 214 days) editions of the nine
24 newspapers during the study period were hand searched by three trained research assistants
25 (psychologists), allowing us to include several newspapers that didn't have a strong online presence.
26 Our search yielded 1,681 suicide articles. We included articles that primarily reported on specific
27 instances of non-fictional suicide events, including deaths, non-fatal attempts or ideation/threats. We
28 also included articles that primarily contained general commentary on the issue of suicide, including
29 discussion of high-risk groups, research findings, prevention programs or initiatives, raising
30 awareness of suicide, or commentary on any other aspect of suicide/suicide prevention. We
31 excluded articles where suicide was only mentioned briefly (i.e. <50% of the article) and articles
32 with a focus on terrorist-related suicide bombings or euthanasia.

33
34
35 Firstly, descriptive information was extracted from each article, including: name of newspaper,
3 section of newspaper, number of sentences, the primary focus of the article (i.e. reporting on a
37 suicide event versus a commentary-style article), the type of suicide event reported (i.e. suicide
38 death, attempt, ideation/threat), whether or not the suicide event was connected to an instance of
39 homicide-suicide or a suicide pact, and whether or not the article contained a report of a suicide
40 event that also featured in other suicide articles (either in the same or a different newspaper).

41
42 Secondly, a quality assessment was undertaken to evaluate each article against the WHO suicide
43 reporting guidelines (Department of Mental Health and Substance Abuse, 2008) (see Supplementary
44 File 1). A comprehensive coding frame with definitions and examples for each item was designed to
45 guide the coder in identifying a range of potentially harmful as well as helpful reporting
46 characteristics (see Supplementary File 2). Each characteristic was coded as being either present (1)
47 or absent (0).

48
49
50 A bi-lingual psychologist and researcher (MPsych, MPhil) extracted the descriptive information
51 from each article, made the quality ratings, and entered the data into an Excel database designed for
52 this purpose. We evaluated the inter-rater reliability of the quality assessment through a pilot study
53 of 100 articles that were not part of the final sample. Two independent coders used the coding frame
54 to assess the quality of the pilot study articles. Cohen's Kappa ranged from 0.84 to 1.0, with an
55 average of 0.95, indicating strong inter-rater reliability (McHugh, 2012). Additionally, throughout
56

1
2
3 the study, meetings were regularly held to seek agreement in relation to any minor doubts that arose
4 during the coding process.

5
6 Descriptive statistics were used to analyse the data that were extracted from the newspaper articles.
7

8 **Results**

9 *Descriptive characteristics of the suicide articles*

10
11 The number of articles reporting on suicide-related news varied considerably between newspapers
12 (see Table 1). Of the 1,681 articles, 29.6% were published in just one of the nine daily newspapers,
13 Daily Thanti, while just 6.5% were published in New Indian Express. The average number of
14 suicide articles per newspaper per day was 0.9 (range 0.5 to 2.3).
15
16

17
18 The majority were published in the main section of the newspaper (86.6%), as opposed to a
19 supplement (13.4%) (see Table 2). The articles were typically brief, with a little over half (54.5%)
20 being 10 sentences or less. Reports of suicide event(s) were the primary focus of the majority of
21 articles (95.9%), with just 4.1% primarily focused on commentary on an aspect of suicide / suicide
22 prevention.
23

24
25 In the 68 commentary articles, the most commonly discussed topics were suicide among farmers
26 (32.4%, n=22) and decriminalisation of suicide (13.2%, n=9). The remaining commentary articles
27 covered a disparate range of suicide / suicide prevention topics, including: social media suicide
28 prevention tools, suicide abatement legislation, stigmatising language around suicide, reducing access
29 to guns, filicide-suicide, altruistic suicides, and suicides among a range of sub-population groups
30 including women, youths, students, Dalits (members of the lowest caste), ex-servicemen, celebrities
31 and members of cults.
32

33
34 The most common type of suicide events reported were suicide deaths (74.3%), followed by suicide
35 attempts (20.9%) and suicidal ideation/threats (2.0%). Among the articles reporting on these types
36 of suicide events, a high proportion were connected to instances of homicide-suicide (9.3%) and
37 suicide pacts (12.4%), relative to the rarity of these events, and, somewhat surprisingly, over two-
38 thirds (68.6%) contained reports of suicide events that had also appeared in at least one other article.
39

40
41 Of the 33 articles reporting on instances of suicidal ideation/threats, only one (3.0%)
42 took the approach of demonstrating how someone 'mastered their suicidal crisis' using positive
43 coping strategies and supports. The remainder (97.0%, n=32) were stories of incidents of people
44 threatening suicide in response to frustrations or conflict, typically with institutions or family
45 members. Frustrations or conflicts that were reported were broad ranging, such as; perceived police
46 inaction in response to a rape allegation, extensive court delays in a divorce hearing, and parental
47 refusal of their child's choice of marital partner.
48

49 *Assessing the quality of reporting against WHO guidelines*

50
51 Several articles were prominently placed, with 4.9% of articles placed on the front page and 16.8%
52 within the first three pages (see Table 3). The suicide method (92.7%) was almost always reported
53 and in 43.1% of articles the method was described in detail (i.e. at least two specific details about
54 how the method was implemented). Furthermore, 8.2% of articles named a public site as the
55 location of a suicide death/attempt. Negative life events were reported in four out of five articles
56 (81.3%); this extended to offering a monocausal explanation for a suicide event in 53.4% of articles
57 and 9.5% of articles reported on details from a suicide note.
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Headlines were particularly “eye-catching”, often containing the word ‘suicide’ (72.5%), a suicide method (39.8%) and/or a negative life event (39.3%) that was typically purported to be a causal factor in the suicide incident. For example, we observed the headlines ‘Debt trap: Three of a family commit suicide using lethal shots’ (New Indian Express, 13/6/16) and ‘Girl blamed for poor cooking hangs herself’ (Daily Thanti, 16/6/16). Accompanying photos of suicidal persons were also common (21.7%), which goes against guidelines that caution the use of such photos unless family members have given explicit permission. In some instances, these photos were highly sensationalistic; for example, a photo of a suicidal person ablaze with bystanders attempting to douse the flames was published on a front page (Daily Thanti, 16/9/16). Another common feature was a description of the effects of a suicide event on bereaved persons (74.9%), which was typically a description of the distress of finding the body of a friend or family member; for example, ‘when they broke open the door they were shocked to find [their 15-year old son] hanging from the ceiling fan’ (Deccan Chronicle, 13/6/16). However, interviews with bereaved persons were very rare (2.7%).

Potentially helpful reporting characteristics were largely absent. The connection between mental health problems (7.5%) or drug/alcohol abuse (4.4%) and suicidality was infrequently made. Opinions from mental health professionals (1.1%), research findings (0.3%) and population-level suicide statistics (2.6%) were very rarely featured. Just 3.6% of articles mentioned a suicide prevention program/service and only 2.5% gave specific contact details for a suicide support service such as a hotline.

The quality of reporting varied between newspapers (see Supplementary File 3). For example, 39 of 42 articles that reported contacted details for a suicide support service were from one newspaper (The Hindu).

Discussion

Responsible media reporting of suicide is advocated as an effective population-level suicide prevention strategy (Zalsman et al., 2016; World Health Organization, 2014), aimed at reducing imitation suicide deaths, improving suicide-related attitudes and preventative practices, and showing due consideration to bereaved persons (Department of Mental Health and Substance Abuse, 2008; World Health Organization, 2014). Our study found that a daily diet of short, explicit, repetitive, simplistic and potentially harmful suicide-related news was served up to readers of popular daily newspapers in Tamil Nadu, India, with a low level of adherence to WHO suicide reporting guidelines.

The high frequency of suicide articles and harmful reporting characteristics that we observed is consistent with concerns that adherence to guidelines is particularly low in Asia, where suicide deaths are highly newsworthy events (Beautrais A et al., 2008; Fu et al., 2011; Ju Ji et al., 2014; Fu and Yip, 2009). Considering the high suicide rate in some parts of Asia and the documented influence of media reports on imitative suicides, particularly when the report is of a celebrity (Chen et al., 2010; Cheng et al., 2007; Niederkrotenthaler et al., 2012; Fu and Chan, 2013), there is a clear need for the implementation and evaluation of strategies that engage the media in suicide prevention.

The suicide-related articles we examined did little to educate the public about the issue of suicide, consolidating findings from a small prior study of newspapers in the city of Bangalore (Chandra et al., 2014). Very few articles contained expert opinions from health professionals, research findings, suicide statistics or information about suicide prevention programs, all of which are useful ways to educate the public about the issue of suicide and to inform that help is available for those in crisis.

1
2
3 Very few articles reported in a way that served to dispel the myths that there is nothing you can do
4 to prevent suicide and that there are no preceding warning signs. This is an unfortunate missed
5 opportunity considering that a recent household survey in a major South Indian city found that over
6 50% of people believe in the myth that “suicide happens without warning” (Poreddi et al., 2016).
7 Similarly, few articles recognised the link between poor mental health and drug/alcohol abuse with
8 suicidality, both major risk factors for suicide (Cavanagh et al., 2003; Armstrong et al., 2014;
9 Hawton and van Heeringen, 2009; Nock et al., 2008; Borges et al., 2017; Cottler et al., 2005) and
10 something that is a challenge to address in India where mental health literacy is low and
11 stigmatising attitudes are prominent (Shidhaye and Kermode, 2013; Armstrong et al., 2011;
12 Hofmann-Broussard et al., 2017).

14
15 It is critical to note that until early 2017 ‘attempt to commit suicide’ was a crime under the Indian
16 Penal Code, as formulated by the British Raj (Ranjan et al., 2014). Consistent with this, it is often
17 crime journalists who report on suicide incidents in India, as they have the relationship with the
18 police who provide the information on these incidents. The recent decriminalisation of suicide may
19 prove to be an important and timely catalyst, shifting suicide out of the criminal realm and into the
20 health sphere. Responsible media reporting of suicide by health, rather than crime, journalists will
21 be an essential component of this progression.

22
23 It is unlikely media professionals in India will independently engage with the WHO media
24 guidelines en masse without local advocacy, training and support, particularly given the intense
25 pressures to quickly create commercially competitive content. One strategy that has improved
26 reporting in Australia has been to develop national guidelines for media reporting of suicide (Pirkis
27 et al., 2009), and it may be worthwhile considering the approach of developing media guidelines
28 that are relevant to the Indian context and that have the support of the Indian Press Council.
29 However, it will be important to learn from previous experiences elsewhere in the world. A recent
30 review found that there is significant variability in the effect of media guidelines across countries.
31 While guidelines typically improved the quality of reporting, journalists’ awareness, use and
32 opinion of guidelines was generally low, and approaches centred on media consultation and
33 collaboration had the greatest success (Bohanna and Wang, 2012). Media professionals may
34 legitimately argue that it is in the public interest to report on newsworthy suicides and some could
35 be sceptical about the association between media reports and imitative suicidal behaviour, viewing
36 any restrictions as censorship that perpetuates “taboos” around suicide (Bohanna and Wang, 2012;
37 Collings and Kemp, 2010; Sinyor et al., 2016). To inform the development of national guidelines,
38 further research should examine the perspectives of media professionals in India in relation to
39 suicide reporting to enable a critical engagement with their concerns, as has been done elsewhere
40 (Cheng et al., 2014). Any national guideline development process should be done with media
41 professionals, rather than for them, and resources will be required for active dissemination strategies
42 and ongoing training and monitoring (Hazell T et al., 2006).

43
44 Moreover, rather than focusing exclusively on detrimental reporting practices, it can also be
45 emphasised that media can make a positive contribution to suicide prevention (Bale, 2001). Media
46 professionals emphasise their important role in “agenda-setting”, “framing” stories, and “priming”
47 the audience to respond to issues in certain ways (Hollings J, 2013), all of which could be harnessed
48 to support rather than hinder suicide prevention.

49
50 There were some limitations to our study. We only looked at newspapers and it would have been
51 desirable to examine reports by other forms of mass media, including television given that
52 ecological studies indicate a relationship between nonfictional television portrayal of suicide and
53 actual suicides (Pirkis and Blood, 2001). Future research may also look at suicide content on social
54
55
56
57
58
59
60

1
2
3 media, in light of recent studies highlighting the potential for copycat behaviour in connection to
4 social media posts on celebrity suicides (Ueda et al., 2017). Additionally, we only looked at
5 newspapers from Tamil Nadu, however five of the nine newspapers were in the top twenty most
6 read newspapers in the country and the English-language newspapers in particular have a broad
7 readership across the country. Finally, we are unable to comment on the suicide articles relative to
8 all other articles that were published during the study period.
9

11 **Conclusion**

12 Media reports of suicide events in India were found to be common and of low quality when assessed
13 against WHO suicide reporting guidelines, creating risks for the population and missing valuable
14 opportunities to educate the public about suicide and its prevention. There is a clear need for further
15 research to examine the impact of the current reporting style. Collaborative strategies should be
16 devised to foster the positive contribution that media can make to prevent suicide deaths.
17
18
19

21 **Funding**

22 This study was funded by The University of Melbourne and The Society for Mental Health
23 Research.
24

25 **Declaration of Conflicting Interests**

26 The authors declare that there is no conflict of interest.
27

28 **Acknowledgements**

29 We thank Ms Asha Ramia Veeraraghavachary, Mrs Thangaraj Fathima Roseline and Ms Nivetha
30 Vincent from Voluntary Health Services in Chennai for their thorough work in hand searching the
31 nine newspapers for the relevant articles for this study.
32
33

34 **Supplementary materials**

35 The data analysed for this manuscript is based on publically available media reports
36 published between June and December 2016. Researchers interested in accessing
37 these media reports may contact the corresponding author.
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

References

- Armstrong G, Jorm AF, Samson L, et al. (2014) Suicidal ideation and attempts among men who inject drugs in Delhi, India: psychological and social risk factors. *Social Psychiatry and Psychiatric Epidemiology* 49: 1367-1377.
- Armstrong G, Kermode M, Raja S, et al. (2011) A mental health training program for community health workers in India: impact on knowledge and attitudes. *International Journal of Mental Health Systems* 5: 17.
- Audit Bureau of Circulations. (2015) *Details of most circulated publications for the audit period January - June 2014*, Mumbai, India: Audit Bureau of Circulations.
- Bale C. (2001) The media as partners in suicide prevention. A column from Befrienders International. *Crisis* 22: 141-142.
- Beautrais A, Hendin H, P Y, et al. (2008) Improving Portrayal of Suicide in the Media in Asia. In: Hendin H, Phillips M, Vijayakumar L, et al. (eds) *Suicide and Suicide Prevention in Asia*. Geneva: World Health Organization, 39-49.
- Beautrais AL. (2006) Suicide in Asia. *Crisis* 27: 55-57.
- Bohanna I and Wang X. (2012) Media guidelines for the responsible reporting of suicide: a review of effectiveness. *Crisis* 33: 190-198.
- Borges G, Bagge CL, Cherpitel CJ, et al. (2017) A meta-analysis of acute use of alcohol and the risk of suicide attempt. *Psychological Medicine* 47: 949-957.
- Cavanagh JT, Carson AJ, Sharpe M, et al. (2003) Psychological autopsy studies of suicide: a systematic review. *Psychological Medicine* 33: 395-405.
- Chandra PS, Doraiswamy P, Padmanabh A, et al. (2014) Do newspaper reports of suicides comply with standard suicide reporting guidelines? A study from Bangalore, India. *International Journal of Social Psychiatry* 60: 687-694.
- Chen YY, Tsai PC, Chen PH, et al. (2010) Effect of media reporting of the suicide of a singer in Taiwan: the case of Ivy Li. *Social Psychiatry and Psychiatric Epidemiology* 45: 363-369.
- Cheng AT, Hawton K, Lee CT, et al. (2007) The influence of media reporting of the suicide of a celebrity on suicide rates: a population-based study. *International Journal of Epidemiology* 36: 1229-1234.
- Cheng Q, Chen F and Yip PS. (2017) Media effects on suicide methods: A case study on Hong Kong 1998-2005. *PLoS One* 12: e0175580.
- Cheng Q, Fu KW, Caine E, et al. (2014) Why do we report suicides and how can we facilitate suicide prevention efforts? Perspectives of Hong Kong media professionals. *Crisis* 35: 74-81.
- Collings SC and Kemp CG. (2010) Death knocks, professional practice, and the public good: the media experience of suicide reporting in New Zealand. *Social Science & Medicine* 71: 244-248.
- Cottler LB, Campbell W, Krishna VA, et al. (2005) Predictors of high rates of suicidal ideation among drug users. *Journal of Nervous Mental Disorders* 193: 431-437.
- Department of Mental Health and Substance Abuse. (2008) *Preventing Suicide: A Resource for Media Professionals*, Geneva: World Health Organization & International Association for Suicide Prevention.

- 1
2
3 Fu KW and Chan CH. (2013) A study of the impact of thirteen celebrity suicides on
4 subsequent suicide rates in South Korea from 2005 to 2009. *PLoS One* 8:
5 e53870.
- 6 Fu KW, Chan YY and Yip PS. (2011) Newspaper reporting of suicides in Hong
7 Kong, Taiwan and Guangzhou: compliance with WHO media guidelines and
8 epidemiological comparisons. *Journal of Epidemiology and Community*
9 *Health* 65: 928-933.
- 10 Fu KW and Yip PS. (2009) Estimating the risk for suicide following the suicide
11 deaths of 3 Asian entertainment celebrities: a meta-analytic approach. *Journal*
12 *of Clinical Psychiatry* 70: 869-878.
- 13
14 Hawton K and van Heeringen K. (2009) Suicide. *Lancet* 373: 1372-1381.
- 15 Hazell T, Skehan J and Greenhalgh S. (2006) Face-to-face briefings and the uptake of
16 resources for reporting suicide and mental illness. *Australian Journalism*
17 *Review* 28: 113-125.
- 18 Hofmann-Broussard C, Armstrong G, Boschen MJ, et al. (2017) A mental health
19 training program for community health workers in India: impact on
20 recognition of mental disorders, stigmatizing attitudes and confidence.
21 *International Journal of Culture and Mental Health* 10: 62-74.
- 22 Hollings J. (2013) Reporting suicide in New Zealand: Time to end censorship. *Pacific*
23 *Journalism Review* 19: 136-155.
- 24 Ju Ji N, Young Lee W, Seok Noh M, et al. (2014) The impact of indiscriminate media
25 coverage of a celebrity suicide on a society with a high suicide rate:
26 epidemiological findings on copycat suicides from South Korea. *Journal of*
27 *Affective Disorders* 156: 56-61.
- 28 Klimes-Dougan B, Wright N and Klingbeil DA. (2016) Suicide Prevention Public
29 Service Announcements Impact Help-Seeking Attitudes: The Message Makes
30 a Difference. *Front Psychiatry* 7: 124.
- 31 McHugh ML. (2012) Interrater reliability: the kappa statistic. *Biochemical Medicine*
32 *(Zagreb)* 22: 276-282.
- 33 Media Research Users Council. (2017) *Indian Readership Survey 2014*, Mumbai,
34 India: Media Research Users Council.
- 35 National Crime Records Bureau. (2015) *Accidental Deaths & Suicides in India: 2015*,
36 New Delhi, India: Ministry of Home Affairs, Government of India.
- 37 Niederkrotenthaler T, Fu KW, Yip PS, et al. (2012) Changes in suicide rates
38 following media reports on celebrity suicide: a meta-analysis. *Journal of*
39 *Epidemiology and Community Health* 66: 1037-1042.
- 40 Niederkrotenthaler T, Reidenberg DJ, Till B, et al. (2014) Increasing help-seeking and
41 referrals for individuals at risk for suicide by decreasing stigma: the role of
42 mass media. *American Journal of Preventive Medicine* 47: S235-243.
- 43 Niederkrotenthaler T, Voracek M, Herberth A, et al. (2010) Role of media reports in
44 completed and prevented suicide: Werther v. Papageno effects. *British Journal*
45 *of Psychiatry* 197: 234-243.
- 46 Nock MK, Borges G, Bromet EJ, et al. (2008) Cross-national prevalence and risk
47 factors for suicidal ideation, plans and attempts. *British Journal of Psychiatry*
48 192: 98-105.
- 49 Patel V, Ramasundarahettige C, Vijayakumar L, et al. (2012) Suicide mortality in
50 India: a nationally representative survey. *Lancet* 379: 2343-2351.
- 51 Pirkis J and Blood RW. (2001) Suicide and the media. Part I: Reportage in
52 nonfictional media. *Crisis* 22: 146-154.
- 53
54
55
56
57
58
59
60

- 1
2
3 Pirkis J, Dare A, Blood RW, et al. (2009) Changes in media reporting of suicide in
4 Australia between 2000/01 and 2006/07. *Crisis* 30: 25-33.
- 5 Pirkis JE, Burgess PM, Francis C, et al. (2006) The relationship between media
6 reporting of suicide and actual suicide in Australia. *Social Science and*
7 *Medicine* 62: 2874-2886.
- 8 Ponnudurai R. (2015) Suicide in India - changing trends and challenges ahead. *Indian*
9 *Journal of Psychiatry* 57: 348-354.
- 10 Poreddi V, Thimmaiah R, Ramu R, et al. (2016) Gender Differences Related to
11 Attitudes Toward Suicide and Suicidal Behavior. *Community Mental Health*
12 *Journal* 52: 228-232.
- 13
14 Ramadas S, Kuttichira P, John CJ, et al. (2014) Position statement and guideline on
15 media coverage of suicide. *Indian Journal of Psychiatry* 56: 107-110.
- 16 Ranjan R, Kumar S, Pattanayak RD, et al. (2014) (De-) criminalization of attempted
17 suicide in India: A review. *Industrial Psychiatry Journal* 23: 4-9.
- 18 Shidhaye R and Kermode M. (2013) Stigma and discrimination as a barrier to mental
19 health service utilization in India. *Int Health* 5: 6-8.
- 20 Sinyor M, Pirkis J, Picard A, et al. (2016) Towards a shared understanding:
21 Perspectives from Toronto's first media forum for suicide prevention.
22 *Canadian Journal of Public Health* 107: e330-e332.
- 23 Stack S. (2005) Suicide in the media: a quantitative review of studies based on non-
24 fictional stories. *Suicide and Life Threatening Behaviours* 35: 121-133.
- 25 The Economist. (Sept 23rd 2010) *Where print makes profits: Old-fashioned papers*
26 *are thriving in India.*
- 27
28 Turecki G and Brent DA. (2016) Suicide and suicidal behaviour. *Lancet* 387: 1227-
29 1239.
- 30 Ueda M, Mori K, Matsubayashi T, et al. (2017) Tweeting celebrity suicides: Users'
31 reaction to prominent suicide deaths on Twitter and subsequent increases in
32 actual suicides. *Social Science and Medicine* 189: 158-166.
- 33 World Health Organization. (2014) *Preventing suicide: A global imperative*, Geneva:
34 World Health Organization.
- 35 Zalsman G, Hawton K, Wasserman D, et al. (2016) Suicide prevention strategies
36 revisited: 10-year systematic review. *Lancet Psychiatry* 3: 646-659.
- 37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Table 1: Frequency and density of suicide articles in 9 major newspapers in Tamil Nadu between June and December 2016

Newspaper	% (n)	Average number of suicide articles, per newspaper, per day^a
Daily Thanti (T)	29.6% (498)	2.3
Dinamalar (T)	13.1% (220)	1.0
Deccan Chronicle (E)	10.9% (183)	0.9
Dinakaran (T)	9.5% (160)	0.7
Dinamani (T)	8.3% (139)	0.6
Times of India (E)	8.2% (137)	0.6
The Hindu (E)	7.1% (119)	0.6
Malai Malar (T)	6.8% (115)	0.5
New Indian Express (E)	6.5% (110)	0.5
Across all newspapers	100.0% (1,681)	0.9

Note: (T) signifies a Tamil language publication and (E) signifies an English language publication.

^a The average number of suicide articles per newspaper, per day, was calculated by dividing the total number of articles from each newspaper by the number of days (i.e. 214 days) between June and December 2016. The average across all newspapers was calculated by dividing the total number of articles by the number of days (i.e. 214 days), and then dividing by the number of newspapers (i.e. 9).

Table 2: Descriptive characteristics of suicide articles in Tamil Nadu between June and December 2016 (n=1,681)

Characteristics	Total (n=1,681) % (n)
Section of Newspaper	
Main section	86.6% (1,455)
Supplement	13.4% (226)
Number of sentences	
< 11 sentences	54.5% (916)
11 – 20 sentences	34.8% (585)
>20 sentences	10.7% (179)
Mean	11.6
Primary focus of article^a	
Report of suicide event(s)	95.9% (1,613)
Commentary on an aspect of suicide	4.1% (68)
Type of suicide events covered^b (among event articles, n=1,613)	
Suicide death events	74.3% (1,249)
Non-fatal suicide attempt events	20.9% (351)
Suicidal ideation/threat events	2.0% (33)
Suicide event is situated within a story of homicide-suicide or a suicide pact (among event articles, n=1,613)	
Homicide-suicide event	9.3% (157)
Suicide pact event	12.4% (209)
Repetitive reporting^c (among event articles, n=1,613)	
Event reported only once	31.4% (506)
Event reported more than once	68.6% (1,107)

^a The primary focus of the article was either a report of a specific suicide event(s) or a general commentary on the issue of suicide.

^b An article could have multiple foci. 22 articles had multiple foci, including 21 that focused on both a suicide death event(s) and a suicide attempt event(s), and 1 article focused on both a suicide attempt event(s) and a suicidal ideation/threat event(s).

^c The percentage of suicide articles that contained details of suicide events that were also featured in other suicide articles, either in the same newspaper.

Table 3: Quality assessment of reporting against World Health Organization suicide reporting guidelines

Potentially harmful characteristics		Total (n=1,681) % (n)
Highly prominent placement	Front page First three pages	4.9% (83) ^a 16.8% (283)
Suicidal act	Suicide method reported Detailed account of method (i.e. at least two specific details about how the method was implemented) Public site named as location of a suicide death/attempt	92.7% (1,559) 43.1% (724) 8.2% (138)
Causes of suicidality	Negative life event(s) related to suicide reported (e.g. debt) Monocausal explanation for suicidality Details from suicide note reported	81.3% (1,366) 53.4% (897) 9.5% (160)
Headlines	'Suicide' in the headline Suicide method in the headline Life event(s) in the headline	72.5% (1,219) 39.8% (669) 39.3% (661)
Consideration for bereaved persons	Effects on bereaved persons reported Interview with bereaved persons	25.1% (422) 2.7% (46)
Photos	An accompanying photo Photo of a suicidal person	28.0% (470) 21.5% (362)
Potentially helpful characteristics		
Causes of suicidality	Recognises link with poor mental health Recognises link with substance dependence/use	7.6% (128) 4.4% (74)
Dispels common suicide myths	Dispels the myths that there are no preceding warning signs and/or that there is nothing you can do to prevent suicide	2.0% (34)
Draws on health experts, research and data to inform public	Expert opinion from a mental health professional Research findings Population level data / statistics related to suicide	1.3% (21) 0.3% (5) 2.6% (44)
Raises awareness of prevention services	Mentions a suicide prevention program / support service Provides contact details for a suicide support service	3.6% (60) 2.5% (42) ^b

^a Includes 30 articles that commenced on page 1 and continued on a later page.

^b Includes 39 articles from one newspaper (The Hindu) that provided contact details for a suicide support service.