A content analysis and comparison of two peaks of newspaper reporting during a suicide cluster to examine implications for imitation, suggestion and prevention.

Amanda Marchant¹, Menna Brown¹, Jonathan Scourfield², Keith Hawton³, Louise Cleobury¹, Michael Dennis¹, Keith Lloyd¹, Jo McGregor¹, Ann John*¹

*Corresponding author Prof Ann John Professor of Public Health and Psychiatry Deputy Head, Swansea University Medical School ILS2, Swansea University Swansea, UK SA2 8PP

Email: <u>A.John@swansea.ac.uk</u> Phone: +44(0) 1792602568

Funding: Health and Care Research Wales Cherish SC-12-14

¹Swansea University Medical School, Institute of Life Sciences 2, Swansea University, UK

² Cardiff School of Social Sciences, Cardiff University, UK

³Centre for Suicide Research, University of Oxford

Abstract: 196 words

Background: In 2007-2008, media attention focused on a cluster of youth suicides in the UK.

There were two peaks (P1, P2) in the volume of newspaper reporting of the deaths. The

number of possible suicides was greater than expected at the time of the first peak but not

the second. Aims: To explore any differences in the content of the reporting peaks and to

consider implications for imitation and prevention. *Methods*: A content analysis of two peaks

of newspaper reporting was conducted. Results: There were 204 articles in P1 (27.12.07-

19.02.08) and 157 in P2 (20.02.08-15.03.08). Four main themes were identified: individual

stories; possible causes; features of reporting of the cluster and educating and informing the

public. P1 articles more frequently contained: explicit details of method; photographs of the

deceased and contained more characterisation of individuals Limitations: The focus was on

print media, future studies should incorporate online and social media content. *Conclusions:*

The findings provide some support for the hypothesis of a process of suggestion initiated by

sensationalist reporting in P1. This contributes to the evidence base of the role of the press

in suicide imitation and prevention highlighting the importance of care when reporting

suicides.

Key words: suicide; media; newspapers; reporting; contagion

2

There are several examples of increases in suicides following reporting of actual or fictional suicides (Haw, Hawton, Niedzwiedz, & Platt, 2013; Niederkrotenthaler et al., 2012). This imitation phenomenon, or Werther effect, (Phillips 1974) refers to modelling of suicidal behaviour with the media facilitating suggestion. This paper contributes to evidence about the effect of media reporting on point clusters, via in-depth study of the reporting of a specific cluster (John et al., 2016; Jones et al., 2013).

Factors contributing to suicide clusters are complex. There is evidence that the media plays a role (Haw et al., 2013; Niederkrotenthaler et al., 2012). Several aspects of reporting may influence vulnerable individuals to engage in imitative behaviour including: the prominence/repetition of reporting; reference to a 'suicide epidemic' (Niederkrotenthaler et al., 2010); identification with the individual in question (Pirkis & Nordentoft, 2011); front page placement; headlines containing the word 'suicide' and detailed descriptions of the individual and acts (Gould, Kleinman, Lake, Forman, & Midle, 2014). Responsible reporting includes educating the public about suicide and encouraging help-seeking (WHO 2017). Recommendations for responsible reporting of suicides have been promoted by the World Health Organisation (2017) and Samaritans (2013).

Statistical analysis using SaTScan covering 2000-2009, identified a statistically significant temporospatial cluster (p.0.029) of ten deaths in 15-34 year olds centred around the County Borough of Bridgend for the period 27.12.2007-19.02.2008 (Jones et al., 2013). This cluster was smaller, shorter and predominantly later than the phenomenon extensively reported in print media. All ten deaths were contemporaneous with an initial peak of reporting (P1; Supplementary Figure 1) where 204 articles were published relating to the cluster. A second peak in reporting (P2) of the cluster began the day after the last statistically identified cluster death on 20.02.2008 (John et al., 2016). Three further deaths occurred during P2 of reporting. This was not greater than expected based on previous years.

A quantitative examination of these articles found evidence of poor quality reporting using the checklist PRINTQUAL (John et al., 2014) in relation to responsible reporting of suicide (John et al., 2016). This came at a time when good quality reporting was essential for suicide prevention. Reporting of a possible suicide cluster began before there were more suicides than expected in the area (John et al., 2016). The presence of a higher than expected number

of deaths during P1 but not during P2 presents a rare opportunity to examine features of reporting for potential contagion. Differences between the two peaks in reporting have not been examined nor was there any in-depth qualitative analysis. Thematic analysis may reveal differences in the content of reporting between the two peaks, contributing to evidence of specific features of reporting that may influence clustering of suicidal behaviour.

Aims and objectives

The aim of this study was to conduct a thematic content analysis of national and regional newspaper reporting during the two reporting peaks of the apparent suicide cluster to explore differences, considering implications for imitation, suggestion and prevention.

Method

Ethical permissions

The South West Wales Research Ethics Committee granted ethical approval (REC reference: 10/WMW02/10).

Theoretical framework

A thematic content analysis (Hsieh & Shannon 2005) was carried out.

Sample sources and data collection

Articles were extracted from 577 UK newspaper articles previously identified through searches of specialist databases (Nexis and Newsbank), Google and individual newspaper websites using the search terms 'suicide' and 'Bridgend'. Original articles were retrieved through newspaper subscriptions and library archives. For a full search description, see John et al (2014).

The current study extracted data from the two previously identified reporting peaks: from the date of the first death to the date of the last statistically defined cluster death (27.12.2007-19.02.2008) and a second identified peak in reporting of the cluster from 20.02.2008-15.03.2008 (John et al., 2016).

Development of the coding framework

A coding frame was developed through a combination of a priori codes from John et al (2014), WHO (2017) guidelines, Samaritans (2013) guidelines, previous literature (e.g. (Pirkis & Nordentoft, 2011) and inductive generation of codes. For the latter, three members of the study team (AJ, JS, LC) independently identified recurrent and prominent themes in an initial sample of articles (10%), for discussion. A group of experts further reviewed and discussed the coding frame, new codes were added and themes were consolidated. The coding frame was piloted on 20% of the articles in each peak by two independent coders (AM, MB). An overall level of agreement (88%) was calculated using NVivo. Cohens Kappa for each item was calculating using Excel.

The initial coding frame consisted of 42 items. Cohen's Kappa revealed insufficient agreement (<0.7) for 12 items. Four items related to the categorisation of photographs received a score <0.4 and were removed from the analysis. The remaining eight items were subject to further discussion, definitions refined and items in all articles were independently recoded. Following this the final coding frame consisted of 37 items. All items had an inter-rater reliability score ≥0.7.

Variables

Article features. Including placement in paper; presence and content of photographs; the word 'suicide' or method in the headline; mention of suicide contagion/copy-cat deaths and, discussion of school tasks related to suicide notes/funerals.

Suicide hotspot. Encompassing terms unique to this analysis (e.g. 'suicide valley')

Causes of the cluster. Grouped broadly into blame on the internet and blame on the press.

Causes of individual suicides. This was examined where an article reported on reasons for an apparent suicide either from the perspective of the journalist or from family and friends. These were defined as: simple, where a suicide was said to be attributable to one event (e.g. relationship breakdown); complex, defined as discussion of two or more possible events/factors or a statement that the cause was thought to be complex and, unknown consisting of statements that the reason is not understood/known. Discussion of the role of drugs/alcohol or of mental health issues or previous self-harm were also recorded.

Features of reporting of apparent suicides. Encompassing: reports of deaths from the cluster area or from elsewhere; reporting of previous deaths not the focus of the current article; mention of the scale of the problem, number of deaths or collections of photographs; details of suicide method including the location and materials used and, mention of tributes/memorials.

Attempts to educate and inform. Includes signposting to information/advice; statistics or academic content; statement that suicide is preventable and discussion of suicide prevention strategies/interventions.

Individual stories. For each individual mentioned by name data was collected on: age, sex, and date of death; number of articles in which they appear; placement on the front page, within in the paper or in a list of names; photographs; details of method; excessive characterisation (e.g. hobbies, college courses or other information that may make them relatable to other vulnerable individuals) and, mention of memorials/tributes.

Data extraction

The number of articles referring to each code identified and the number of references to it were calculated. Nvivo was used to identify word frequency within each peak. Each individual was assigned a random initial and place names have been removed from quotations. While the articles included in this study are publically available the decision not to include the names of individuals was taken as a precautionary step to safeguard those bereaved. This was considered important here given the nature of reporting of this suicide cluster, the time that has elapsed and to avoid any further press attention or distress. The Fishers exact test was calculated using SPSS v.22 to estimate differences between percentages of articles in each peak referring to each code.

Results

In total 361 newspaper articles were analysed (P1 n=204; P2 n=157).

P1 and P2 contained similar proportions of articles on the front page and articles containing photographs (Table 1). Significantly more articles in P1 contained pictures of the deceased, contained the word 'suicide' or suicide method in the headline and included phrases such as 'suicide hotspot/town/valley.'

'Suicides' was the most commonly used word in both peaks and '[name of town]' the second. In P1, hanging is the third most used word (average of 4.2 uses per article). Hanging is the seventh most frequently used word in P2 (average of 0.6 uses per article).

Four principle themes emerged across the two peaks of reporting: individual stories; possible causes; features of reporting of the cluster; and educating/informing the public.

Theme One: Individual stories

The portrayal of individuals and stories relating to apparent suicide were reported in this theme (Table 2). There was more characterisation of individuals in P1 than in P2 (P1 84.8% [95% CI 79.2-89.1; n=173] P2 56.7% [95% CI 48.6-64.5; n=89]; P<.05). Almost half of P1 and a third of P2 articles reported on deaths in the locality that happened before the onset of the cluster. Suspected or attempted suicides occurring during P1 were reported with names, details of method and the person. While there were three additional suspected suicide deaths during P2 no names or details were reported. There were a greater proportion of articles in both peaks reporting on apparent suicides in females despite the majority of individuals being male.

P1 reports on 40 individuals aged 10-57; 38 people who had taken their own lives and two who had attempted suicide (one reported extensively n=27 articles during P1). In contrast, P2 reported on 23 individuals aged 15-27 with the previous attempted suicides featuring in just two articles. P1 reported on seven deaths from elsewhere in the world including a 10-year old child reported to have taken his own life after hearing about the cluster on the news. P2 focused on young people related to the cluster with only three deaths from elsewhere reported.

8

The first female reported in the cluster was the most frequently reported individual in P1. She is mentioned in 45% of P1 articles (n=92) and her photograph appears in 34 articles. Twenty-three articles talk about tributes/memorials to her including 21 about online tributes.

'Within hours of the death of B,...., a site dedicated to her name appeared on the web, with photographs, poems and tributes. By yesterday afternoon, nearly 3,000 people had logged on to the site' P1 24.01.2008

Twenty-three articles included extensive detail typifying the sort of person she was considered to be including events leading up to her death. There were photographs on social media of her with E who had also taken his own life and these were published repeatedly. One report proposed this as the reason for the press attention:

'It is telling that [town] hit the headlines only when ..., B, was linked to one of the boys by a photograph. She was pretty girl who, as every report said, had her "whole life ahead of her". Until then, it wasn't much of a story' P1 19.02.2008

In P2, the most reported individual was a female who died the day before the onset of P2. Over half of articles included her photograph. Details of method were published in 56% of articles reporting on her including 23 articles detailing the location. Excessive personal details were included in 25 articles. She was described as 'pretty' and 'popular.' Sixteen articles reported on offline tributes (online tributes n=4).

'G's family also laid flowers at the common in [park], five miles from [town]. Their tribute read: "...quoted..." P2 20.02.2008.

This was the only death reported in P2 with a high volume of articles, photographs, tributes and personal details. During P1, five individuals who died by suicide were reported in this way. Reporting of these individuals, all of whom died during P1 differed between peaks. In P1, their social media was the focus of much reporting with reports of online memorials, photographs and details drawn directly from social media accounts. Social media and online memorials appear infrequently in P2.

P1 extensively reported on four deaths occurring as far back as January 2007, almost a year before the cluster began. These individuals appeared in over 50 articles each, appearing most frequently in lists of names, often with excessive details of the method. P2 included less coverage with the most reported individual appearing in 24 articles. These individuals appeared less frequently in lists of names in P2 than in P1. P2 less frequently included details of method for these individuals with the exception of one individual where further detail appeared following an inquest.

Themes Two: Possible causes

This theme focuses on potential causes, for both individual suicides and the apparent cluster (Table 3). Significantly more P1 than P2 articles discussed potential reasons for individual suicides, most often reported to be unknown, or attributable to a single event. Complex reasons for suicide, mental health issues/previous self-harm and the role of drugs/alcohol were rarely discussed in either peak.

Over half of articles in both peaks discuss possible reasons for the cluster. P1 included significantly more discussion of the potential role of the internet in suicide imitation, while P2 included significantly more discussion of the press. While some articles discussed the role of the press in suicide imitation, others claimed that the press were not responsible. Articles in P2 discussed the feeling that the town had been stigmatized by the coverage and reported bereaved families describing the impact of the press, e.g.

'The parents of A also blamed their son's death on media coverage. A's mother, P, said: "Media coverage put the idea into A's head. We have lost our son and media reporting of this has made it an incredibly difficult time and more unbearable"' P2 20.02.2008

Theme Three: Features of reporting of the cluster

This theme focuses on the way in which the apparent suicides were reported and details surrounding them. P1 more frequently reported on the individual deaths themselves and more often discussed online tributes/memorials. In P2, suspected suicides were more often mentioned in relation to another topic without any details. Significantly more articles in P1

reported details of method including the type, ligature/materials and location at times alongside pictures or maps pinpointing where individuals lived/died. More than 60% of articles in both peaks report on the scale of the problem including the number of deaths or collections of photographs. Lists of names were often included with explicit details of method beside each name.

Theme four: Educating and informing the public

This theme focuses on efforts to inform and educate the public including signposting to sources of information/advice or inclusion of statistics/academic content. The two peaks of reporting were largely similar in relation to efforts to educate and inform the public with over half of articles in each peak containing such content. Less than 20% of articles in each peak signposted to sources of information/advice (e.g. helplines). More than 40% of articles in each peak reported on suicide prevention strategies. P1 was focused locally (e.g. volunteers), whereas P2 included coverage of the National Suicide Prevention Strategy for Wales, developed in early 2008.

Discussion

This study offered a unique opportunity to examine two peaks of media reporting associated with an apparent suicide cluster. Previous research demonstrated that P1 was associated with a number of deaths within a statistically identified probable suicide cluster whilst P2 was not associated with any more deaths than would have been expected. Results here demonstrate differences in the content of newspaper reports in these two peaks.

P1 articles focused on the reporting of apparent suicides with more details on individuals. Forty individuals aged 10-57 were mentioned by name including two apparent attempted suicides, seven deaths from elsewhere in the world and deaths as far back as 2001. In contrast, P2 reported on 23 individuals aged 15-27, only three from elsewhere in the UK. P1 reported significantly more details of method including materials used and location. A greater proportion of P1 articles include the word 'suicide' and method in the headline, pictures of the deceased and repeated reporting, including reporting of suicides not related to the cluster. P2 focused on the potential role of print media in the imitation of suicidal behaviour. These key differences in content between the two peaks lend support to the hypothesis that the content of newspaper reports during P1 may have contributed to imitation of suicidal behaviour to a greater degree than the content of articles in P2. However, causality cannot be inferred in studies of this type.

Several events may have influenced the content of articles. There were photographs of two of the individuals who took their own lives during P1 together on social media and other individuals who died during P1 were members of the same family. This may have contributed to sensationalist reporting. The events during P2 were somewhat different. A televised press conference in which the police blamed print media for contributing to suicide imitation was the focus of much of P2 as was the development of the National Suicide Prevention Strategy for Wales. Such events likely affected both the content of reporting and conversations taking place in the community.

Strengths and Limitations

This study focused exclusively on print media due to the extensive print media reporting of this cluster and we have not included any TV or online social media or blogs. We examined original newspaper articles in the form they were printed rather than updates added online where images and text may be altered and sign-posting to sources of support may be added later. Strong evidence exists for the influence of print media on suicide rates (Sisask & Värnik, 2012), including many of the features P1 reporting (e.g. focus on individuals, volume of articles etc.) However, audiences are now subject to many influences including television and social media (Daine et al., 2013; Marchant et al., 2017) where there is also evidence of imitation (Hawton et al., 1999). Increases in suicide deaths in young people following the release of a controversial television series was found to be concordant with the period in which social media discussions of the series were greatest (Niederkrotenthaler et al., 2019). The role of new media and online news should not be overlooked in studies of more contemporaneous suicide clusters

Whilst our results demonstrate differences in the two peaks of reporting, causality cannot be inferred in observational studies. Multiple factors likely contributed to the initiation, maintenance and end of the cluster. Intervention and support provided by health and voluntary agencies during the later period of the cluster may have reduced the risk of additional suicides. While press coverage in this cluster preceded it's statistical start (John et al., 2016) the role of the media must be considered alongside other modes of transmission, such as word of mouth (Haw et al., 2013).

Implications

Media interest is more likely following the suicides of young people (Marzano, Fraser, Scally, Farley, & Hawton, 2018). Previous research has found that stories focused on young people who die by suicide were most strongly associated with the initiation of suicide clusters (Gould et al., 2014). The focus on individual stories and characterisation of individuals seen in P1 here further demonstrates the importance of supporting the media in their response to a suspected cluster, encouraging the positive role of the media in educating the public (Gould 2001). Guidelines on responsible suicide reporting often conflict with journalism conventions, values and perceived responsibility of truth-telling and full disclosure of information (Yaqub, Beam, & John, 2017). This has been echoed by recent research related to coverage of

cyberbullying and suicide further highlighting the discrepancy between reporting guidelines journalistic norms and values (Young, Subramanian, Miles, Hinnant, & Andsager, 2017). Quotations in reports in P2 underscore the intrusiveness of press coverage for the bereaved. It is important for producers of content to be considerate of people bereaved by suicide particularly given their vulnerability to suicidal behaviour (WHO 2017).

Conclusion

Substantial differences were found in content across two peaks of reporting. P1 was previously found to be associated with a greater number of deaths by suicide and contained more sensationalist coverage than P2. P2 focused on the potential impact of reporting and was not associated with an increase in deaths by suicide. This contributes to the evidence of the role of the print media in suicide imitation. Robust interaction with the media early in the emergence of a cluster is important. Future research should endeavour to analyse recent coverage of suicide to gain an up-to-date picture of reporting, incorporating online media. Raising awareness of the role of the press in suicide imitation and, educating journalists about guidelines could reduce harm caused by reporting, educate the public and encourage help seeking.

References

Daine, K., Hawton, K., Singaravelu, V., Stewart, A., Simkin, S., & Montgomery, P. (2013). The power of the web: a systematic review of studies of the influence of the internet on self-harm and suicide in young people. *PLoS One*, 8(10), e77555.

Gould, M. S. (2001). Suicide and the media. *Annals of the New York Academy of Sciences*, 932(1), 200-224. doi:10.1111/j.1749-6632.2001.tb05807.x

Gould, M. S., Kleinman, M. H., Lake, A. M., Forman, J., & Midle, J. B. (2014). Newspaper coverage of suicide and initiation of suicide clusters in teenagers in the USA, 1988–96: a retrospective, population-based, case-control study. *The Lancet Psychiatry*, 1(1), 34-43. doi:10.1016/S2215-0366(14)70225-1

Haw, C., Hawton, K., Niedzwiedz, C., & Platt, S. (2013). Suicide clusters: a review of risk factors and mechanisms. *Suicide and Life-Threatening Behavior*, 43(1), 97-108. doi:10.1111/j.1943-278X.2012.00130.x

Hawton, K., Simkin, S., Deeks, J. J., O'Connor, S., Keen, A., Altman, D. G., . . . Bulstrode, C. (1999). Effects of a drug overdose in a television drama on presentations to hospital for self poisoning: time series and questionnaire study. *British Medical Journal*, 318(7189), 972-977. doi:10.1136/bmj.318.7189.972

Hsieh, H.F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, 15(9), 1277-1288.

John, A., Hawton, K., Gunnell, D., Lloyd, K., Scourfield, J., Jones, P. A., . . . Price, S. (2016). Newspaper Reporting on a Cluster of Suicides in the UK. Crisis. 38(1), 17-25. doi:10.1027/0227-5910/a000410

John, A., Hawton, K., Lloyd, K., Luce, A., Platt, S., Scourfield, J., . . . Dennis, M. S. (2014). PRINTQUAL - a measure for assessing the quality of newspaper reporting of suicide. Crisis, 35(6), 431-435. doi:10.1027/0227-5910/a000276

Jones, P., Gunnell, D., Platt, S., Scourfield, J., Lloyd, K., Huxley, P., . . . Dennis, M. (2013). Identifying probable suicide clusters in Wales using national mortality data. PLoS One, 8(8), e71713. doi:10.1371/journal.pone.0071713

Marchant, A., Hawton, K., Stewart, A., Montgomery, P., Singaravelu, V., Lloyd, K., . . . John, A. (2017). A systematic review of the relationship between internet use, self-harm and suicidal behaviour in young people: The good, the bad and the unknown. PLoS One, 12(8), e0181722.doi:10.1371/journal.pone.0181722

Marzano, L., Fraser, L., Scally, M., Farley, S., & Hawton, K. (2018). News coverage of suicidal behavior in the United Kingdom and the Republic of Ireland. *Crisis*, *39*(*5*), 386-396. doi:10.1027/0227-5910/a000533

Niederkrotenthaler, T., Fu, K.-w., Yip, P. S., Fong, D. Y., Stack, S., Cheng, Q., & Pirkis, J. (2012). Changes in suicide rates following media reports on celebrity suicide: a meta-analysis. *Journal of epidemiology and community health*, 66(11), 1037-1042. doi:10.1136/jech-2011-200707

Niederkrotenthaler, T., Stack, S., Till, B., Sinyor, M., Pirkis, J., Garcia, D., . . . Tran, U. S. (2019). Association of increased youth suicides in the United States with the release of 13 Reasons Why. *JAMA psychiatry*, 76(9), 933-940. doi:10.1001/jamapsychiatry.2019.0922

Niederkrotenthaler, T., Voracek, M., Herberth, A., Till, B., Strauss, M., Etzersdorfer, E., . . . Sonneck, G. (2010). Role of media reports in completed and prevented suicide: Werther v. Papageno effects. *The British Journal of Psychiatry,* 197(3), 234-243. doi:10.1192/bjp.bp.109.074633

World Health Organisation. (2017). *Preventing suicide. A resource for media professionals-update 2017* Retrieved from https://www.who.int/mental_health/suicide-prevention/resource_booklet_2017/en/

Phillips, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review*, 340-354.

Pirkis, J. and Nordentoft, M. (2011). Media Influences on Suicide and Attempted Suicide. In R. C. O'Connor, S. Platt and J. Gordon (eds.) *International Handbook of Suicide Prevention* (pp.531-44) doi:10.1002/9781119998556.ch30

Samaritans. (2013). *Media guidelines for reporting suicide and self-harm*. Retrieved from http://www.samaritans.org/sites/default/files/kcfinder/files/press/Samaritans%20Media%2 0Guidelines%202013%20UK.pdf.

Sisask, M., & Värnik, A. (2012). Media roles in suicide prevention: a systematic review. *International journal of environmental research and public health*, 9(1), 123-138. doi:10.3390/ijerph9010123

Yaqub, M. M., Beam, R. A., & John, S. L. (2017). 'We report the world as it is, not as we want it to be': Journalists' negotiation of professional practices and responsibilities when reporting on suicide. *Journalism*. doi:10.1177/1464884917731957

Young, R., Subramanian, R., Miles, S., Hinnant, A., & Andsager, J. L. (2017). Social representation of cyberbullying and adolescent suicide: A mixed-method analysis of news stories. *Health communication*, 32(9), 1082-1092. doi: 10.1080/10410236.2016.1214214

Table 1 Characteristics of articles in P1^a and P2^a %(95% Confidence Intervals; n)

Characteristic	P1	P2	р
Placement in paper			
Front page	9.8 (6.2-14.9; 20)	8.3 (4.7-14.0; 13)	.714
Other pages	90.2 (85.1-93.8; 184)	92.4 (86.7-95.8; 145)	.576
Photographs			
Deceased person	58.8 (51.7-65.6; 120)	36.3 (28.9-44.4; 57)	<.001
Other ^b	17.2 (12.4-23.2; 35)	36.3 (28.9-44.4; 57)	<.001
No photograph	35.3 (28.8-42.3; 72)	38.9 (31.3-47.0; 61)	.510
Suicide 'hotspot'c	11.3 (7.6-16.3; 23)	3.2 (1.4-7.2; 5)	.005
Mention of contagion or copycat deaths	26.5 (20.7-33.2; 54)	17.8 (12.4-24.9; 28)	.058
Suicide in headline	42.6 (35.8-49.8; 87)	31.2 (24.2-39.2; 49)	.029
Method in headline	11.3 (7.6-16.3; 23)	3.8 (1.8-8.1; 6)	.011
School tasks on suicide notes or funerals ^d	0 (0-0; 0)	11.5 (7.1-17.8; 18)	<.001

- a. Refers to Peak 1 and P2 respectively
- b. Photograph of something other than the deceased person. This could include photographs of the town, politicians or families
- c. Includes phrases specific to cluster including 'suicide valley' and 'death town'
- d. During P2 local comprehensive schools received press attention following two separate class tasks one related to writing of suicide notes and the other related to planning funerals. Both of these were discussed in the press in relation to recent suicides

Table 2 Reporting of individuals^a during two peaks by gender age and date of death %(95% Confidence Intervals; n)

		Individuals Articles		Articles	
		P1	P2	P1	P2
Apparent suicides	All	40	23	84.8 (79.2-89.1; 173)	56.7 (48.6-64.5; 89)
Before or during	Before P1	21	14	44.1 (37.5-51; 90)	26.8 (20.2-34.5; 42)
statistically defined cluster ^b	During P1	17	9	77.5 (71.2-82.6; 158)	47.8 (39.8-55.9; 75)
Gender	Males	29	15	64.7 (57.9-70.9; 132)	39.5 (31.9-47.6; 62)
	Females	11	8	71.1 (64.5-76.9; 145)	42.7 (34.9-50.8; 67)
Age	<25	27	21	82.4 (76.5-87; 168)	56.1 (47.9-63.9; 88)
	25-34	5	2	33.3 (27.2-40.1; 68)	8.3 (4.7-14.0; 13)
	35+	8	0	3.4 (1.7-6.9; 7)	0

a. This refers to all individuals mentioned by name in a given article

b. All the reporting in both peaks focused on individuals who took their own lives up until the 19.02.2008. While there were three additional possible suicides during the second peak of reporting (20.02.2008-15.03.2008) none of these were reported by name during this time

Table 3 Comparison of themes one, two and four between reporting peaks %(95% Confidence Intervals; n)

D20/

	P1%	P2%	Р
Theme 2: Possible causes	76.5 (69.9-82; 156)	65.6 (57.6-72.9; 103)	.003
Reason for individual suicide ^a	31.9 (25.9-38.5; 65)	24.2 (18.2-31.5; 38)	.010
Complex ^b	4.9 (2.7-8.8; 10)	3.2 (1.4-7.2; 5)	.443
Simple ^c	16.2 (11.8-21.8; 33)	18.5 (13.2-25.3; 29)	.332
Unknown ^d	16.7 (12.2-22.4; 34)	13.4 (8.9-19.6; 21)	.576
Drugs or alcohol	31.9 (25.9-38.5; 65)	24.2 (18.2-31.5; 38)	.679
Mental health self-harm	8.3 (5.1-13.2; 17)	3.8 (1.6-8.5; 6)	.087
Possible cause of the cluster	66.7 (59.7-73.0; 136)	54.8 (46.7-62.7; 86)	.022
Internet	63.7 (56.7-70.2; 130)	38.9 (31.3-47.0; 61)	<.001
Press	9.8 (6.2-14.9; 20)	33.1 (25.9-41.1; 52)	<.001
Theme 3: Features of reporting of the cluster	89.2 (83.9-93; 182)	80.9 (73.7-86.5; 127)	<.001
Suicides	76.5 (70.2-81.8; 156)	47.8 (40.1-55.5; 75)	<.001
From cluster area ^e	69.6 (63-75.5; 142)	45.9 (38.3-53.7; 72)	<.001
From outside cluster area	8.3 (5.3-12.9; 17)	3.2 (1.4-7.2; 5)	.047
Reporting of previous deaths ^f	54.9 (47.8-61.8; 112)	35.7 (28.3-43.7; 56)	<.001
Scale/number of deaths/lists of names/collections of photographs	69.1 (62.2-75.3; 141)	60.5 (52.4-68.1; 95)	.095
Details of method	64.7 (57.7-71.2; 132)	42.0 (34.3-50.2; 66)	<.001
Location (e.g. at home, woodland)	45.6 (38.7-52.7; 93)	24.8 (18.5-32.5; 39)	<.001
Materials used e.g. ligature, types of pills	9.8 (6.4-14.7; 20)	1.9 (0.7-5.5; 3)	.002
Type (i.e hanging)	63.2 (56.2-69.8; 129)	41.4 (33.7-49.5; 65)	<.001
Unusual method ^g	8.8 (5.5-13.8; 18)	3.8 (1.6-8.5; 6)	.086
Tributes/memorials	31.9 (25.6-38.8; 65)	20.4 (14.5-27.7; 32)	.017
Offline	6.9 (3.9-11.5; 14)	7.0 (3.7-12.5; 11)	1
Online	28.9 (22.9-35.7; 59)	11.5 (7.1-17.8; 18)	<.001
Theme 4: Educating and informing the public	54.4 (47.3-61.3; 111)	56.7 (48.6-64.5; 89)	.671
Signposting to information or advice	16.7 (12.0-22.7; 34)	19.7 (14.0-27.0; 31)	.491
Statistics or academic content	16.7 (12.0-22.7; 34)	21 (15.1-28.4; 33)	.339
Statement that suicide is preventable	7.4 (4.3-12.1; 15)	5.1 (2.4-10.1; 8)	.515
Prevention strategies or intervention	44.6 (37.7-51.7; 91)	40.8 (33.1-48.9; 64)	.520

- a. Reason for suicide with reference to a specific individual.
- b. Refers to articles where multiple reasons are given for why an individual may have taken their own life, or reasons are described as 'complex' or similar. WHO (2017) guidelines state that discussion of complex reasons for suicide has a role in educating and informing the public
- c. Refers to articles where one event, such as a relationship breakdown is said to have preceded an apparent suicide.
- d. Discussion of reason for suicide being unknown either from the perspective of family/friends or from the perspectives of journalists
- e. Defined as county borough in question and neighbouring counties
- f. Refers to reporting of previous deaths not the focus of the current article
- g. Unusual method here refers to any method other than hanging