

The relationship between media reporting of suicide and actual suicide in Australia

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Abstract

This study aimed to determine whether media items about suicide were associated with differential increases in actual suicides. Data were available on 4635 suicide-related items appearing in Australian newspapers and on radio and television news and current affairs shows between March 2000 and February 2001. These data were combined with national data on completed suicides occurring during the same period, by a process that involved identifying the date and geographical reach of the media items and determining the number of suicides occurring in the same location in selected weeks pre- and post-item. Regression analyses were conducted to determine whether the likelihood of an increase in post-item suicides could be explained by particular item characteristics. We found that 39% of media items were followed by an increase in male suicides, and 31% by an increase in female suicides. Media items were more likely to be associated with increases in both male and female suicides if they occurred in the context of multiple other reports on suicide (versus occurring in isolation), if they were broadcast on television (versus other media), and if they were about completed suicide (versus attempted suicide or suicidal ideation). Different item content appeared to be influential for males and females, with an increase in male suicides being associated with items about an individual's experience of suicide and opinion pieces, and an increase in female suicides being associated with items about mass- or murder-suicide. Item prominence and quality were not differentially associated with increases in male or female suicides. Further research on this topic is required, but in the meantime there is a need to remain vigilant about how suicide news is reported. Mental health professionals and suicide experts should collaborate with media professionals to try to balance 'public interest' against the risk of harm.

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Introduction

The question of whether reporting of suicide in news media leads to imitation has been hotly debated for years. Until the 1960s, the debate was based on impressions. Since then, however, a

number of international studies have examined the relationships between media portrayals of suicide and subsequent suicidal behaviours. The majority of these have been large-scale ecological studies assessing the relationship between newspaper reports of suicide and actual suicides, the first having been conducted by Phillips (1974). Using a quasi-experimental design, Phillips examined the frequency of suicide in months in which a front-page suicide article appeared in the US press between 1947 and 1968, and compared this with the frequency in corresponding months in which no such article appeared. Adjusting for seasonal effects and changing trends in this way, he found a significant increase in the number after 26 front-page articles and a decrease after seven of them. The effect increased as a function of the amount of publicity given to the story, was particularly evident for young people, and was strongest in the geographical areas where the suicide story was published.

Since Phillips' study, over 50 other similar studies of the impact of suicide stories in news media have been conducted internationally (Stack, 2005).¹ Most have focussed on newspaper reporting of suicide, but some have also considered portrayal of suicide on television news and in non-fiction books. Several narrative reviews of these studies have been published (Gould, 2001; Martin, 1998; Phillips & Lesyna, 1995; Platt, 1994; Schmidtke & Schaller, 1998; Stack, 1990a; Velting & Gould, 1997), as well as two meta-analyses (Stack, 2000, 2005).

We conducted our own systematic review of the studies that were conducted up to the beginning of 2000, examining the evidence for a causal relationship between portrayal of suicide in the given media and actual suicidal behaviour (Pirkis & Blood, 2001a, 2001b). We concluded that the body of evidence suggested that a causal association existed, on the basis of Hill's criteria for causality (Hill, 1971). Specifically, the association between media coverage of suicide and actual suicides satisfied the criteria of: (a) consistency (reliably observed, regardless of study design and population sampled); (b) strength (statistically significant, and showing evidence of a dose–response effect such that greater exposure to the media coverage of suicide equated to greater increases in suicides); (c) temporality

(making chronological sense, in that the media coverage of suicide occurred before the actual suicides); specificity (clear, such that a substantial proportion of people who experienced the outcome of suicide had been exposed to media coverage of suicide); and (d) coherence (in line with known facts concerning suicidal behaviour, in that it can be modelled).

Our own review (Pirkis & Blood, 2001a, 2001b), and those of Stack (Stack, 2000, 2005), suggested that the 'copycat' effect was more apparent under some conditions than others. For example, it varied in relation to time, peaking within the first 3 days and dropping off by about 2 weeks. Extensive coverage, prominent items, items in which the method of suicide was explicitly detailed and items in which the suicide was glamorised or sensationalised were particularly likely to be followed by copycat behaviours. For given demographic groups (e.g., young women), items about suicides among members of the same demographic group were particularly influential, as were items about suicides by celebrities.

Various theories have been posited to explain the causal mechanism underpinning the observed relationship between media reporting of suicide and actual suicidal behaviour, the most popular of which is social learning theory (Bandura, 1977). Social learning theory not only offers a means of understanding the 'copycat' phenomenon in general, but also provides an explanation for some of the observed conditions that enhance the likelihood of the phenomenon occurring. Social learning theory suggests that the media may reinforce behaviours such as suicide which would normally be inhibited, by presenting these behaviours as acceptable, or even glamorous. A key element of social learning theory is the notion that the observer reverses the model in some way (e.g., because of his/her celebrity status), or views his/her own circumstances as similar to those of the model (e.g., because of his/her demographic characteristics). In addition to this 'horizontal' or 'vertical' identification with the model, the observer evaluates the extent to which the model's behaviour is reinforced (e.g., glamorised) when deciding whether to imitate it. Social learning theory also demonstrates a dose–response effect, whereby the greater the exposure of an observer to a particular modelled behaviour (e.g., through extensive or prominent coverage), the greater the likelihood of his/her imitating that behaviour.

¹Numerous studies of the impact of portrayal of suicide in entertainment media have also been conducted, but these are not considered here.

Despite the substantial body of evidence pointing to a causal relationship between media reporting of suicide and actual suicidal behaviour, and the coherent theoretical explanations for this behaviour, there is still much that is not understood. In particular, certain methodological problems with many of the above studies have led to gaps in knowledge. Most studies have been relatively poor at describing the nature and quality of the media stories under scrutiny, assuming that all reports are bad and all of their impacts are negative. The generalisability of these studies to the Australian setting is also questionable, since only one comparatively small study has been conducted locally (Hassan, 1995).

The current study overcame some of these issues by making use of data from a previous project that we conducted, known as the Media Monitoring Project (Pirkis, Blood et al., 2002; Pirkis, Francis et al., 2002). The Media Monitoring Project provided a comprehensive, year-long picture of reporting of suicide in the Australian print and broadcast media, explicitly describing stories in terms of their nature and quality. These data on media reporting of suicide were combined with Australian data on completed suicides, with the aim of determining whether there was an association between media reporting of suicide and actual suicidal behaviour. Specifically, it considered whether stories of a particular type or level of quality were associated with differential increases in actual completed suicides.

Method

Data on media reporting of suicide

The Media Monitoring Project has been described in detail elsewhere (Pirkis, Blood et al., 2002; Pirkis, Francis et al., 2002), and is summarised here. Between 1 March 2000 and 28 February 2001, a media retrieval service identified suicide-related items appearing in newspapers (all national metropolitan daily newspapers, major suburban and regional newspapers in all states/territories and all suburban and regional newspapers in the state of Victoria) and in news and current affairs shows on all radio and television stations throughout Australia. This search strategy yielded 4813 items on suicide: 1162 (24.1%) were newspaper items; 3043 (63.2%) were radio items and 608 (12.6%) were television items.

Three trained coders extracted identifying and descriptive information for each item. For newspaper items, data were extracted on:

- item page number (front page, not front page); and
- item type (news, feature, editorial, other).

For radio and television items, data were extracted on:

- item time (morning, afternoon, evening);
- item duration (<2 min, 2–4 min, >4 min); and
- item type (news, current affairs, other).

For all items, data were extracted on:

- item date;
- the focus of the item (completed suicide, attempted suicide, suicidal ideation);
- the content of the item (individual's experience, suicide statistics, suicide research, suicide policy/programs, suicide opinion piece, mass suicide, murder-suicide, legal issues regarding suicide); and
- any suicide method referred to in the item (hanging, ingesting substances, gas, firearms, high impact methods, other, not applicable).

Five hundred and four items (just over 10%) were randomly selected to be rated by the coders for quality. Quality ratings were made according to a set of nine dimensions. These dimensions operationalised criteria in *Achieving the Balance* (Mental Health and Special Programs Branch, 1999), a kit aimed at promoting awareness of issues related to suicide and mental health/illness among media professionals, and were as follows:

1. Does the item have any examples of inappropriate language?
2. Is the item inappropriately located?
3. Is the word 'suicide' used in the headline?
4. Is a photograph/diagram or footage depicting the suicide scene, precise location or method used with the item?
5. Is there a detailed discussion of the method used?
6. Is there reference to the fact that the person who died by suicide was a celebrity?
7. Is suicide portrayed as 'merely a social phenomenon' as opposed to 'being related to mental disorder'?

8. Does the item provide information on help services?
9. Are the bereaved interviewed?

Each dimension elicited a response of yes (scored 0) or no (scored 1), with the exception of dimension 8, which was reverse scored. These individual scores were added and converted to percentages, which enabled a total quality score between 0 (poor quality) and 100 (good quality) to be calculated, and subsequently binarised.

Data on actual suicides

The Australian Bureau of Statistics (ABS) provided us with de-identified, individual level data on all suicides that had occurred anywhere in Australia during the period of the Media Monitoring Project (1 March 2000–28 February 2001). The date of death was available for each suicide. The geographical location of each suicide was also provided, defined by Statistical Local Area (SLA) boundaries referenced to the year prior to the suicide. These SLA boundaries were converted to 2001 boundaries.

Combining data on media reporting of suicide with data on actual suicidal behaviour

In order to combine the data on media reporting of suicide with the data on actual suicides, it was necessary to know the date and geographical location of each event (i.e., each media item and each completed suicide). As noted above, data were available on the date of each media item, and on the date and geographical location of each completed suicide. However, information on the geographical location of each media item (i.e., its reach) was not available from existing sources.

Several different resources were used to identify the geographical reach of each of the sources from which the media items were retrieved, in order to ensure that the final data on geographical reach was as accurate and comprehensive as possible. In the case of newspapers, the Australian Media Guide (Margaret Gee Media, 1999) provided a list of the towns and suburbs covered by suburban and regional papers, and indicated statewide or national circulation for metropolitan dailies. Supplementary and/or confirmatory information was sought from websites, or directly from publishers, as necessary. The geographical area (listed as national or statewide, or as town and suburb names) was entered

into a spreadsheet and then converted to postcodes, using data supplied by Australia Post. Each postcode was then converted to the corresponding SLA from the 2001 census, using information provided by the ABS.

In the case of radio and television sources, data were primarily obtained from the Australian Broadcasting Authority (ABA) and the Australian Broadcasting Corporation (ABC) websites, with supplementary and confirmatory information sought from the Australian Media Guide (Margaret Gee Media, 1999) and direct telephone or email contact with individual broadcasting organisations and with OzTam (the official broadcast ratings organisation). For commercial radio and television stations, information on geographical coverage was obtained from the website of the ABA, which provided the licence area of each station in terms of 2001 SLA boundaries. For government radio and television stations, maps of the coverage area of each transmission site were downloaded from the ABC website, and the geographical areas on each map were then transcribed into a spreadsheet (listed as national or statewide, or as town and suburb names). These data were converted to postcodes and then into 2001 SLAs in the same manner as was used for newspapers.

The above process of identifying the reach of each item yielded a series of 2001 SLAs for 4635 (96%) of the original 4813 media items on suicide. The data on suicide-related media items and the data on actual suicides were consolidated into a single data set that was organised into item-SLA records. For each item-SLA combination, the date of the item was attached to the record, as was any descriptive information about the item, and the total quality score associated with it. It was also possible to determine the number of other media items about suicide reaching the same SLA on the same date. Also added to the file were data on the number of male and female suicides in the particular SLA on the date of the item (Day 00), and on each of the dates up to 14 days before (days 14–01) and up to 14 days after (days 01–14).

Data analysis

Four separate regression analyses were performed to examine the association between media reporting of suicide and actual suicidal behaviour, one each for male and female suicides using the full data set, and one each for male and female suicides using a

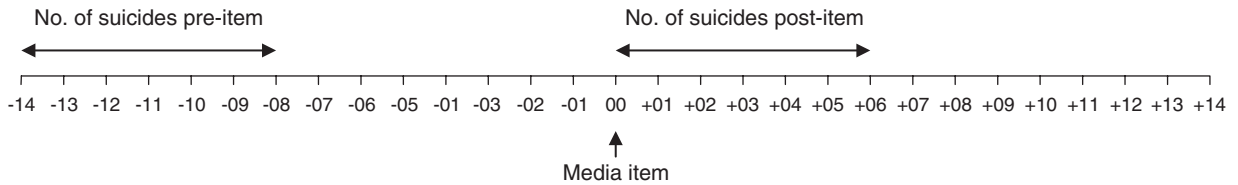


Fig. 1. Pre- and post-item comparison periods.

restricted data set that contained only items rated for quality. In each regression analysis, the outcome variable was the difference between the number of suicides in the seven days after the given media item (i.e., on days 00–06) and the number on days 14–08 before. This was conceptualised as a binary variable: ‘increase’ versus ‘no increase’. The regression analyses considered whether the likelihood of an increase in male or female suicides could be explained by particular characteristics of the media item (see Fig. 1 for a pictorial representation of this analysis strategy).

A decision was made not to include the week immediately before the item as the comparison, in order to minimise the likelihood of the item having been about a suicide that occurred during this period. In other words, every effort was made to ensure that if any association was observed it was more likely to be explained by media items influencing suicidal behaviour than by suicidal behaviour influencing media items. It should be noted that this approach excluded media items in the first 14 days of the Media Monitoring Project from the analysis, because suicide data for the pre-period were not available.

The objective of the analysis was to determine which, if any, characteristics of media reporting were independently predictive of an increase in suicides, after adjustment for all other variables. Particular emphasis was given to the quality of the media items, in order to test the hypothesis that the number of completed suicide in a given geographical area would be higher than would be expected in the period following a media item on suicide that is of poor quality, and lower than would be expected in the period following a media item of good quality.

Results

Overview of media items on suicide

Fig. 2 provides a monthly breakdown of the total number of media items on suicide retrieved during

the Media Monitoring Project. More detail about these items is available elsewhere (Pirkis, Blood et al., 2002; Pirkis, Francis et al., 2002). There was variation in the frequency of media items by month, with particularly high-volume months being March 2000 ($n = 830$), June–July 2000 ($n = 526$ and 569 , respectively) and October 2000 ($n = 465$). In March, there were numerous articles about deaths in custody following the suicide in jail of a 15-year-old Aboriginal boy in Darwin; in June–July there was a high level of coverage of the story of a prominent Federal politician who attempted, and subsequently completed, suicide; and in October, the figures reflected stories associated with Mental Health Week. The lowest number of items was recorded in September 2000 ($n = 167$), when column space and air time were taken up with coverage of the Sydney Olympics.

Overview of completed suicides

Fig. 3 shows the number of completed suicides in Australia during the data collection period of the Media Monitoring Project, by month. In total, there were 2341 suicides during this period. These suicides were spread relatively evenly across the 12-month study period, increasing slightly over time as indicated by the trend line on the figure.

Association between media items on suicide and actual completed suicides

In total, 1182 media items (39%) were followed by an increase in male suicides (with the increase ranging from 1 to 28 additional suicides); 1139 (25%) were followed by no change in male suicides; and 1674 (36%) were followed by a decrease in male suicides (with the decrease ranging from 1 to 23 fewer suicides). Similarly, 1434 (31%) media items were followed by an increase in female suicides (with the increase ranging from 1 to 15 additional suicides); 1978 (43%) were followed by no change in female suicides; and 1223 (26%) were followed by a

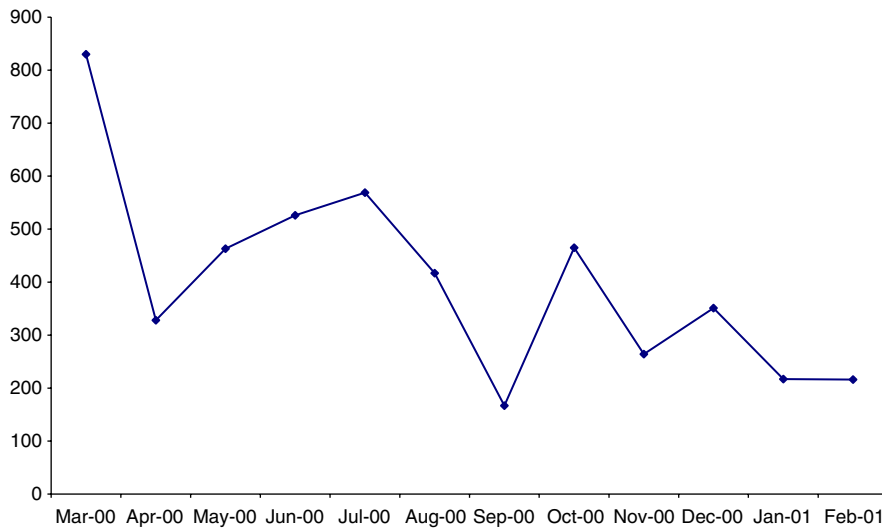


Fig. 2. Total media items about suicide retrieved during the Media Monitoring Project (March 2000–February 2001).

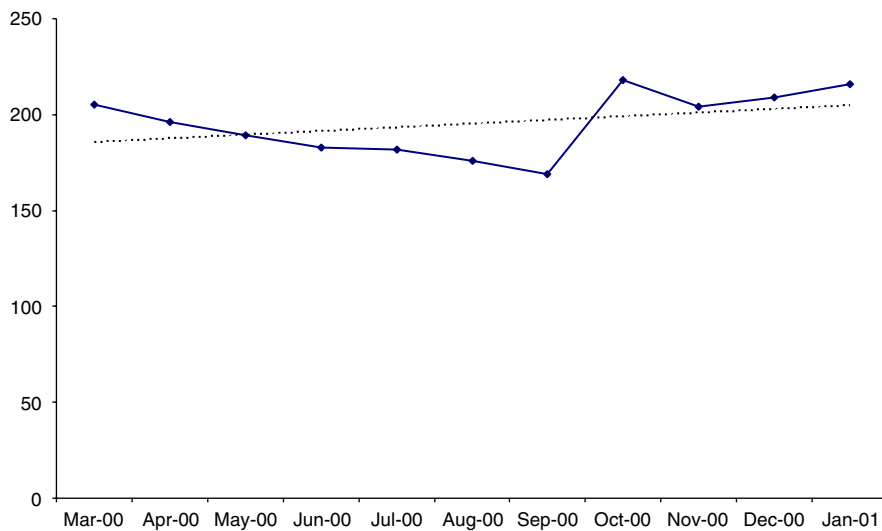


Fig. 3. Completed suicides, Australia (March 2000–February 2001).

decrease in female suicides (with the decrease ranging from 1 to 10 fewer suicides).

Tables 1 and 2 show the characteristics of media items associated with the above increases (for male and female suicides, respectively), using the full data set. The findings can be summarised as follows:

- Compared with radio items, television items were significantly more likely to be associated with an increase in both male (OR = 1.34; 95% CI = 1.11–1.63) and female suicides (OR = 1.51; 95% CI = 1.23–1.84). Newspaper items did not perform significantly differently from radio items.
- Items occurring on the same day as a number of other items about suicide were significantly more likely than items occurring in relative isolation to be associated with an increase in both male and female suicides. For males, this increased likelihood was evident with as few as 4–5 other items (OR = 1.37; 95% CI = 1.05–1.78), and became more marked as the number of other items continued to escalate. For females, the trend was similar, but only reached significance when the number of other

Table 1
Association between characteristics of media items and male suicides (all media items, $n = 4635$)

		OR	95% CI	<i>P</i>
Media type	Radio	1.00		
	Television	1.34	(1.11–1.63)	0.002
	Newspaper	1.13	(0.96–1.33)	0.128
Other items about suicide	0–3	1.00		
	4–5	1.37	(1.05–1.78)	0.019
	6–10	1.31	(1.04–1.66)	0.022
	11–20	1.77	(1.40–2.24)	0.000
	>20	3.37	(2.60–4.37)	0.000
Item focus	Completed suicide	1.16	(0.98–1.36)	0.084
	Attempted suicide	1.01	(0.83–1.23)	0.929
	Suicidal ideation	0.80	(0.65–0.98)	0.028
Item content	Individual's experience	1.36	(1.15–1.63)	0.000
	Statistical overview	1.14	(0.95–1.37)	0.156
	Research initiative	1.19	(0.96–1.47)	0.106
	Policy/program initiative	1.05	(0.88–1.24)	0.602
	Opinion piece	1.52	(1.20–1.93)	0.001
	Mass suicide	1.28	(0.98–1.68)	0.075
	Murder suicide	0.50	(0.38–0.66)	0.000
	Media coverage of suicide	1.14	(0.81–1.62)	0.447
	Legal issues re. suicide	1.03	(0.76–1.40)	0.844
	Causes of suicide	1.26	(0.89–1.80)	0.191
Suicide method	Hanging	0.82	(0.58–1.16)	0.262
	Ingestion of substances	1.16	(0.70–1.93)	0.561
	Gas	1.11	(0.68–1.81)	0.671
	Firearm	0.77	(0.48–1.24)	0.279
	High impact method	0.89	(0.48–1.62)	0.695
Prominence	Prominent	0.96	(0.81–1.14)	0.650

items reached beyond 20 (OR = 4.13; 95% CI = 3.13–5.44).

- Items that were about suicidal ideation were significantly less likely than items that were not about suicidal ideation to be associated with an increase in both male (OR = 0.80; 95% CI = 0.65–0.98) and female suicides (OR = 0.77; 95% CI = 0.62–0.97). Items that were about suicide attempts were significantly less likely than items that were not about suicide attempts to be associated with an increase in female (but not male) suicides (OR = 0.79; 95% CI = 0.64–0.99).
- Content-wise, items demonstrated different patterns of relationship to male and female suicides. Compared with items without such content, items about an individual's experience (OR = 1.36; 95% CI = 1.15–1.63) and opinion pieces (OR = 1.52; 95% CI = 1.20–1.93) were significantly more likely to be followed by an

increase in male suicides, and items featuring murder-suicides (OR = 0.50; 95% CI = 0.38–0.66) were significantly less likely. Items about media coverage of suicide were significantly more likely to be followed by an increase in female suicides (OR = 1.66; 95% CI = 1.16–2.36), and items on policy/program initiatives (OR = 0.62; 95% CI = 0.51–0.75), murder-suicides (OR = 0.72; 95% CI = 0.55–0.96) and legal issues regarding suicide (OR = 0.62; 95% CI = 0.44–0.88) were significantly less likely.

- In the case of both male and female suicides, mention of particular suicide methods did not influence the likelihood of a post-item increase in frequency, and nor did the prominence of the item.

As noted, the association between item quality and increases in male and female suicides was given

Table 2
Association between characteristics of media items and female suicides (all media items, $n = 4635$)

		OR	95% CI	<i>P</i>
Media type	Radio	1.00		
	Television	1.51	(1.23–1.84)	0.000
	Newspaper	1.15	(0.96–1.37)	0.127
Other items about suicide	0–3	1.00		
	4–5	1.24	(0.93–1.66)	0.137
	6–10	1.23	(0.95–1.58)	0.119
	11–20	1.29	(1.00–1.67)	0.053
	>20	4.13	(3.13–5.44)	0.000
Item focus	Completed suicide	0.93	(0.77–1.12)	0.433
	Attempted suicide	0.79	(0.64–0.99)	0.038
	Suicidal ideation	0.77	(0.62–0.97)	0.028
Item content	Individual's experience	1.08	(0.90–1.31)	0.397
	Statistical overview	1.07	(0.88–1.31)	0.503
	Research initiative	0.94	(0.74–1.18)	0.574
	Policy/program initiative	0.62	(0.51–0.75)	0.000
	Opinion piece	1.21	(0.94–1.55)	0.148
	Mass suicide	1.26	(0.95–1.67)	0.115
	Murder suicide	0.72	(0.55–0.96)	0.023
	Media coverage of suicide	1.66	(1.16–2.36)	0.005
	Legal issues re. suicide	0.62	(0.44–0.88)	0.008
Causes of suicide	0.78	(0.52–1.17)	0.232	
Suicide method	Hanging	0.77	(0.52–1.14)	0.191
	Ingestion of substances	1.46	(0.85–2.50)	0.169
	Gas	1.12	(0.67–1.88)	0.659
	Firearm	0.62	(0.36–1.05)	0.077
	High impact method	0.80	(0.41–1.56)	0.506
Prominence	Prominent	0.95	(0.79–1.14)	0.589

special consideration, using the restricted data set that only included items that had been rated for quality during the Media Monitoring Project. When quality alone was considered, items of poor quality were no more likely to be associated with increases in male suicide (OR = 1.09; 95% CI = 0.73–1.63) or female suicides (OR = 1.05; 95% CI = 0.70–1.58). Two separate logistic regressions were conducted that included the variables that had reached significance in the earlier analyses, in order to see whether any of these substantially mediated any influence of item quality. The results are shown in Tables 3 and 4.

The results show that the relationship between item quality and suicides was not mediated by other previously significant factors. In addition, the association between them majority of these other factors and suicides failed to reach significance when the restricted data set was used. The only

factors still exerting an influence were the number of other items, and the item's focus.

Discussion

Some intuitive findings

The current study furthers knowledge about the impact of media reporting of suicide on actual suicides, particularly in the Australian context. It found that although by no means all media items on suicide were associated with an increase in suicides, a substantial proportion was. Certain characteristics of media items were predictive of increases in both male and female suicides. Perhaps the most noteworthy of these findings is the fact that media items that occurred in the context of multiple other reports on suicide were likely to be associated with increases, and that this effect increased as a function

Table 3

Association between item quality and male suicides, controlling for other significant item characteristics (media items rated for quality, $n = 397$)

		OR	95% CI	<i>p</i>
Media type	Radio	1.00		
	Television	0.97	(0.50–1.88)	0.935
	Newspaper	0.93	(0.56–1.52)	0.763
Other items about suicide	0–3	1.00		
	4–5	2.71	(1.15–6.39)	0.022
	6–10	1.47	(0.70–3.10)	0.309
	11–20	1.65	(0.78–3.48)	0.189
	>20	4.40	(1.88–10.30)	0.001
Item focus	Suicidal ideation	0.43	(0.22–0.86)	0.017
Item content	Individual's experience	1.38	(0.88–2.19)	0.164
	Opinion piece	1.31	(0.59–2.91)	0.510
	Murder suicide	0.38	(0.14–1.04)	0.059
Item quality	Good quality	1.04	(0.68–1.60)	0.861

Table 4

Association between item quality and female suicides, controlling for other significant item characteristics (media items rated for quality, $n = 397$)

		OR	95% CI	<i>p</i>
Media type	Radio	1.00		
	Television	0.65	(0.31–1.36)	0.25
	Newspaper	1.07	(0.63–1.81)	0.80
Other items about suicide	0–3	1.00		
	4–5	1.25	(0.52–3.02)	0.61
	6–10	1.04	(0.48–2.21)	0.93
	11–20	0.91	(0.42–1.97)	0.81
	>20	3.88	(1.60–9.36)	0.00
Item focus	Attempted suicide	0.53	(0.26–1.07)	0.08
	Suicidal ideation	0.42	(0.19–0.92)	0.03
Item content	Policy/program initiative	0.69	(0.39–1.20)	0.19
	Mass suicide	1.73	(0.70–4.30)	0.24
	Murder suicide	1.53	(0.57–4.07)	0.40
	Media coverage of suicide	0.82	(0.28–2.38)	0.71
	Legal issues re. suicide	0.67	(0.25–1.81)	0.43
Item quality	Good quality	0.85	(0.53–1.36)	0.49

of the number of other items broadcast or printed on the same day in the same area. This finding is consistent with that of other authors who have demonstrated similar dose–response effects (Phillips, 1974, 1978, 1980; Stack, 1990b; Wasserman, 1984). Consistent with social learning theory, it makes intuitive sense that if the public is faced with

a barrage of reporting on suicide, there is an increased likelihood of vulnerable individuals engaging in ‘copycat’ behaviours.

Also of note is the finding that the medium most likely to run items that were associated with an increase in both male and female suicides was television. It is possible to speculate as to the

reasons for this, again in a way that is consistent with social learning theory. Television is a highly accessible medium that provides both visual and auditory stimuli. For these reasons, it may exert a more powerful influence on attitudes and behaviour than either radio or newspapers, particularly for at-risk individuals.

Also readily interpretable is the finding that items including a focus on suicidal ideation were comparatively less likely to be associated with increases in both male and female suicides, and items focusing on suicide attempts were relatively less likely to be associated with increases in female suicides. Suicidologists recognise that suicidal behaviours occur on a gradient, from suicidal ideation (defined as ‘thoughts of suicide ... [that] ... can vary from transient notions about life being meaningless to intense preoccupation with taking one’s own life’ (Goldney, Winefield, Tiggemann, Winefield, & Smith, 1989)) through attempted suicide (defined as ‘an act with a non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognised therapeutic dosage, and which is aimed at realising [desired] changes ... via the actual or expected physical consequences’ (Platt et al., 1992)) to completed suicide (defined as ‘a death that is the result of an act perpetrated by the victim, with the intention of achieving this outcome’ (Maris, 1991)). Although individual items could have all three foci, many of those that referred to suicidal ideation and suicide attempts did not refer to more extreme suicidal behaviours further up the hierarchy, and it is reasonable to hypothesise that these items would be less likely to trigger completed suicides. Having said this, it should be noted that the items whose focus included completed suicide were not significantly more likely to be followed by a period of increased suicides, although there was a trend in this direction, at least for male suicides.

Some counter-intuitive findings

More complex, and more difficult to explain, is the relationship between item content and increases in male and female suicides. According to social learning theory, it might have been anticipated that those media items that included content relating to an individual’s experience might be the most likely to motivate imitation behaviours, particularly if the

observer identified with the model in some way (Bandura, 1977; Rogers & Carney, 1994). Such items were predictive of increases in male suicides, but not female suicides. Other item content was also associated with increases in suicides, including opinion pieces about suicide (male suicides), mass suicide (female suicides) and media coverage of suicides (female suicides). These findings clearly warrant further exploration in terms of their potential to influence ‘copycat’ acts.

Perhaps even more striking than the above positive findings is the fact that increases in suicide were not predicted by some characteristics of the items that, in previous studies, have been linked to heightened risk. For example, items that explicitly described any of several methods of suicide were not any more likely to be followed by an increase in male or female suicides than those that did not. Findings from other studies have implicated overt descriptions of suicide methods in ‘copycat’ behaviours (Ashton & Donnan, 1979, 1981; Etzersdorfer & Sonneck, 1998; Etzersdorfer, Sonneck, & Nagel Kuess, 1992; Littman, 1985; Sonneck, Etzersdorfer, & Nagel Kuess, 1994; Veysey, Kamanyire, & Volans, 1999). The inconsistency might be explained by the fact that the sampling frame for the current study was more inclusive than those of previous studies—e.g., including all items on suicide and not just those relating to an individual’s experience—and relatively few of the items in the current study actually made reference to a specific suicide method.

Another null finding which is at odds with previous literature is the fact that the prominence of the item made no difference to the likelihood of it being followed by an increase in male or female suicides. Other studies that have restricted their focus to prominent items (e.g., items appearing on the front page of major newspapers) have tended to demonstrate an effect (Bollen & Phillips, 1981; Hassan, 1995; Ishii, 1991; Phillips, 1974, 1977, 1978, 1979, 1980; Stack, 1988, 1990c, 1996; Wasserman, 1992). This includes the only previous Australian study conducted in the area, which found that ‘high impact’ stories published in *The Age* and *The Sydney Morning Herald* between 1981 and 1990 were followed by an increase in suicide rates for males (though not for females) (Hassan, 1995). Again, the discrepant findings in the current study may relate to its more inclusive sampling frame, which included all items on suicide from electronic as well as print media.

Perhaps the most vexatious finding is that item quality (at least as measured by the criteria in achieving the balance (Mental Health and Special Programs Branch, 1999)) bore no relationship to increases in post-item suicides, particularly since no other studies have explicitly explored the impact of item quality. This may have been due to the relatively small sample of items that could be included in the quality analysis, and/or to the relatively blunt nature of the binary quality rating. Different or more refined conceptualisations of quality may need to be developed. We already know from our earlier work, for example, that there were examples of media items identified in the Media Monitoring Project that violated some of the criteria in achieving the balance (Mental Health and Special Programs Branch, 1999), but, at another level, promoted positive social conclusions (Pirkis, Blood et al., 2002). It is counter-intuitive to dismiss the hypothesis that item quality would be likely to have an impact upon the likelihood of a given media item influencing imitation acts.

Study limitations

Certain data limitations associated with the current project must be acknowledged, some of which have been alluded to above. The Media Monitoring Project was a major undertaking, had a more exhaustive sampling frame than other studies, and provided a more comprehensive picture of the way in which the media report suicide than had been available in previous studies. So, it included a broader range of media sources than other studies (i.e., eliciting the vast majority of items about suicide from newspaper, radio and television sources for a full year), and a broader range of media items (i.e., including all items about suicide, not just those relating to the completed suicide of an individual). It is not surprising, therefore, that the study yielded around 13 media items on suicide per day from across Australia. Nonetheless, because the data were originally collected for a different purpose from that for which they were used in the current project, and because the original project had funding and time constraints, the Media Monitoring Project data set had some limitations.

Most notably, the breadth of data described above was provided at the expense of depth of information. In particular, less detail was available about the items regarding individuals' experiences of completed or attempted suicide or suicidal

ideation than might have been desirable. It was beyond the scope of the Media Monitoring Project to distinguish between items about individuals' experiences that explicitly named the individual and those that withheld the name or used a pseudonym, much less to 'cluster' media items about the same individual together. This precluded some potentially useful analyses, including analyses of the impact of stories about suicides by celebrities. As noted, stories about celebrity suicides have been shown to be particularly influential in previous studies. In Stack's (2005) meta-analysis, studies that explored the impact of media items on celebrity suicides were 5.27 times more likely to report a copycat effect than other studies. Having said this, only one suicide that occurred and was reported on during the year-long study period would have qualified as a 'celebrity' suicide—that of the prominent Federal politician mentioned above.

In addition, the broader range of suicide items may have introduced 'noise' that may have masked effects that would otherwise have been apparent, particularly in instances where the number of media items with given characteristics was small. As noted earlier, this might explain some of the counter-intuitive findings described above. So, for example, the fact that items that described particular methods of suicide were not associated with subsequent actual suicide risk, may relate to the fact that the relatively few items that did explicitly mention given methods were effectively 'swamped' by other items. The same may be true for the null findings with regard to prominent items and items of poor quality. In other words, some caution should be exercised in interpreting the more surprising and contentious findings outlined above, as it is probably premature to interpret absence of evidence as evidence of absence.

Future directions

Clearly, the relationship between media reporting of suicide and actual suicidal behaviour is complex. Further work is needed which considers not only the characteristics of media items (e.g., the nature of suicide news items, particularly those dealing with an individual's suicide), but also the characteristics of individuals who extract meaning from these items. Such work should explore the way in which interactions between the characteristics of media items, the characteristics of readers, viewers and listeners, and the characteristics of the social

environment may influence the likelihood of ‘copy-cat’ behaviours and what the longer-term consequences might be. Without further work to explicate these characteristics and the interactions between them, it is difficult to be clear about the circumstances that promote harmful imitative behaviours (or have a positive preventive impact). The ways in which various audiences—particularly those who may be said to be at risk—might interpret, misinterpret, ignore or resist information about suicide portrayed in fictional cultural forms remains relatively unexplored.

Conclusions

To conclude, the study suggests that there may be an association between the quantity of media items in a given period and the number of subsequent suicides, with television items exerting a particularly strong influence. Unravelling the precise characteristics of the media items that may be most likely to be followed by an increase in suicides clearly requires further investigation. The current study went further than many in terms of describing the nature and quality of media items that may or may not be associated with an increase in suicides, but further work on the content and context of portrayal is required.

In the meantime, there is a need to remain vigilant about how suicide news is reported. Mental health professionals and suicide experts should collaborate with media professionals to try to balance ‘public interest’ against the risk of harm, and to promote opportunities for education. Sensitive reporting of suicide that does not glorify or romanticise it and does not provide visual detail of the exact method is preferable, as are depictions that stress consequences for others, potential hazards of particular methods, and sources of help for vulnerable individuals.

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