# Supporting Reporting: On the Positive Effects of Text- and Video-Based Awareness Material on Responsible Journalistic Suicide News Writing

Sebastian Scherr, Florian Arendt, and Markus Schäfer

Suicide is a global public health problem. Media impact on suicide is well confirmed and there are several recommendations on how media should and should not report on suicide to minimize the risk of copycat behavior. Those media guidelines have been developed to improve responsible reporting on suicide (RRS). Although such guidelines are used in several countries, we lack empirical evidence on their causal effect on actual journalistic news writing. We conducted an experiment with journalism students (N=78) in Germany in which we tested whether exposure to awareness material promoting RRS influences news writing. As a supplement to the widely used text-based material, we tested the impact of a video in which a suicide expert presents the guidelines. A video was used as a supplement to text partly due to its potential benefit for prevention efforts over the Internet. We chose a low-budget production process allowing easy reproduction in different countries by local suicide experts. In the experiment, participants were either exposed to written, audio-visual, or no awareness material. Afterwards, participants read numerous facts of an ostensible suicide event and were asked to write a factual suicide news story based on these facts. Analyses indicate that awareness material exposure helped to improve RRS with the awareness video showing the strongest effects. We recommend that suicide prevention should use instructive awareness videos about RRS complementary to text-based awareness material.

**Keywords** journalists' responsible reporting on suicide, media and suicide, suicide awareness material, suicide prevention

According to the WHO, suicides are a major threat to global health (WHO, 2014) with more than 800,000 people dying by suicide worldwide every year (WHO, 2015). Although the absolute number of

suicides has fallen by 9% between 2000 and 2012 with large regional differences (increase in African region by 38%, and a drop of 47% in the Pacific region; WHO, 2014), the WHO named suicide prevention

1

a global imperative with the media playing an integral role for suicide prevention. Interestingly, the role of the media within suicide prevention is ambivalent: On the one hand, media reports about suicide influence both cognition and behavior, and thus, can contribute to an increase of suicides in the general population (Bohanna & Wang, 2012; Phillips, 1974; Pirkis & Blood, 2001; Schäfer & Quiring, 2015; Stack, 2005), especially when media reports are sensational, glorifying, or mention details about a suicide (Niederkrotenthaler et al., 2012). On the other hand, details about overcoming suicidal crises can effectively help to reduce suicides at the same time (Niederkrotenthaler et al., 2010; Sisask & Värnik, 2012; Till, Sonneck, Baldauf, Steiner, & Niederkrotenthaler, 2013). For instance, a recent study by Till, Strauss, Sonneck, and Niederkrotenthaler (2015) shows that watching a movie with a positive ending (coping with crisis) resulted in a reduction of suicide risk particularly in participants who were more vulnerable.

Therefore, efforts in suicide prevention yielded media guidelines about suicide reports worldwide (Bohanna & Wang, 2012; Pirkis, Blood, Beautrais, Burgess, & Skehan, 2006). Their effectiveness for journalistic suicide news reports has been evaluated in several studies using different approaches: Content analyses measured the compliance of news reports with media guidelines (e.g., Fu & Yip, 2008; Niederkrotenthaler & Sonneck, 2007; Nutt, Kidd, & Matthews, 2014; Tatum, Canetto, & Slater, 2010), time-series analyses explored the impact of the implementation of media guidelines on suicide rates (e.g., Niederkrotenthaler & Sonneck, 2007), and qualitative survey studies researched journalists' awareness of media guidelines as well as how much importance they attribute to them within their daily journalistic routines (e.g., Tully & Elsaka, 2004).

## Why the Media Should Report on Suicide Responsibly: Harmful and Helpful Elements

Based on existing meta-analyses and literature reviews, accumulated scientific knowledge strongly speaks for an association between media coverage about suicides and suicides in the population (Niederkrotenthaler et al., 2012; Sisask & Värnik, 2012; Stack, 2000, 2005). More recent studies found that appropriate suicide news coverage can also contribute to reducing suicides (Etzersdorfer, 2008; Niederkrotenthaler & Sonneck, 2007; Niederkrotenthaler et al., 2010). To minimize the danger of copycat suicides (i.e., a so-called "Werther effect"; Phillips, 1974) that would not have taken place without news media coverage of suicide, a great deal of effort has been put into suicide prevention related media guidelines that point out elements of media coverage that are likely to evoke copycat behavior. Thus far, less care has been exercised with regard to a systematic analysis of suicide preventive elements within suicide news coverage, suggested by studies that found evidence for a so-called "Papageno effect" (Niederkrotenthaler et al., 2010).

Previous research has used social cognitive theory to explain copycat suicides (Bandura, 1986, 2001; Blood & Pirkis, 2001; Fu, Chan, & Yip, 2009; Schäfer & Quiring, 2015; Scherr, 2016). In line with social cognitive theory, media coverage can supply suicide model information and strengthen or weaken behaviors that have been part of the repertoire of an individual but had been inhibited. Previously inhibited behaviors will be disinhibited (Bandura, 2001; Blood & Pirkis, 2001) if (1) the media depict models of suicidal behaviors, (2) details about the suicide method or the site of a suicide are presented, or (3) the suicide itself is depicted as an acceptable solution to individual problems. Most likely, this is the case when the imitator identifies with the model—which is more common the more information about the model is presented in the news media (e.g., background information about the private life, private struggles, or individual reasoning for suicide). Moreover, Till et al. (2015) showed an interaction effect between the vulnerability of an individual and identification with media characters on post-screening suicidality.

According to social cognitive theory, the likelihood of imitative behaviors is higher if the model is reinforcing it, that is, if the suicide is glamorized or is depicted as a solution. On the other hand and also in line with Bandura's (1986, 2001) postulations, other elements within suicide news reports are associated with decreased suicidality. These elements are, for instance, mentioning persons who testify for alternative solutions when feeling suicidal, information about where to seek help, or the opportunity to educate the public about suicidality in a more general sense (e.g., reasons for suicidality, development of suicidality as part of other diseases, and predispositions for individual suicidality).

In a nutshell, elements of suicide coverage, which are expected to elicit additional copycat suicides according to social cognitive theory are often included in media guidelines (Bohanna & Wang, 2012; Maloney et al., 2013; Pirkis et al., 2006) and should thus be well-known for journalists. At the same time, other elements, which are likely to prevent additional suicides, are less often used by journalists in their suicide news stories (Fu & Yip, 2008; Pirkis et al., 2009). The first question that will be addressed by the present study is how media guidelines can be promoted for journalists in a way that suicide news stories include an optimal share of less suicide-evoking elements and more suicide preventive elements, so that the suicide coverage can be expected to exploit its full preventive potential in the future.

# How to Effectively Promote Media Guidelines about Suicide News Reports Among Journalists

In 2008, the WHO published six "dos" and six "don'ts" for suicide media coverage (WHO, 2008). These guidelines build the backbone for media recommendations in different countries around the globe. Maloney et al. (2013) could identify any kind of information about how to report on suicides for 74 of the 193 member states of the UN. Of these, 38% of the countries have media recommendations about suicide news reports at all, and, again only 15% of the respective recommendations include a section on the portrayal of suicides on the Internet (Maloney et al., 2013). Hence, it seems obvious that an update of the guidelines will soon be on the global agenda for suicide prevention. An important open question related to this is how to properly inform journalists about media guidelines. Until today, and most likely related to the publication date of the WHO guidelines, studies that explore the effectiveness of media guidelines with journalistic samples mostly distributed printed single-page versions of the WHO guidelines or face-toface briefings of journalists and measured their effect on the compliance of the suicide reports with the guidelines in the aftermath (Michel, Frey, Wyss, & Valach, 2000; Niederkrotenthaler & Sonneck, 2007; Pirkis et al., 2006; Skehan, Greenhalgh, Hazell, & Pirkis, 2006). These best practice examples surely reflect the state-of-the-art of their time and represent pivotal contributions for suicide prevention. Nevertheless, times have changed since most of the media recommendations and guidelines were developed and disseminated. Especially, as the Internet offers unique possibilities of audio-visual forms for presentations that are easily accessible and reproducible for the promotion of health behaviors (Fotheringham, Owies, Leslie, & Owen, 2000; Webb, Joseph, Yardley, & Michie, 2010), it is equally essential to generate more knowledge about how to effectively implement media guidelines within the profession of journalism. First and foremost, audio-visual material can build an enriched information environment that offers convenient access to information, with higher appeal than text especially for younger persons, and reduces literacy requirements for educational purposes in developing countries (see e.g., Fotheringham et al., 2000). Based on this theorizing, we formulate one hypothesis and one related research question:

H<sub>1</sub>: Suicide awareness material will enhance journalists to use more RRS (i.e., in line with the media guidelines).

As there is, to the best of our knowledge, no study that explored the effectiveness of audio-visual suicide awareness material as compared to text-based material within a journalistic sample, we formulated the following research question:

RQ<sub>1</sub>: Does audio-visual material elicit stronger beneficial effects on RRS?

Surprisingly, the impact of media guidelines on the quality of journalist suicide reports has not been tested within the journalistic field. To close this academic void, we questioned whether journalistic suicide stories would contain more positive elements (i.e., elements that might prevent suicides) and/or fewer negative ones (i.e., elements that might evoke suicidal contagion) after journalists were exposed to media guidelines about how to properly report on suicides. Therefore, we conducted an experiment and measured the influence of text- vs. video-based media guidelines on the quality of written journalistic suicide news reports. A sample of journalism students in Germany were exposed

to suicide awareness material and some were not. Afterwards, they were given various texts bites that describe an ostensible suicide event. We asked them to write a news story based on these facts. The main dependent variable was the compliance of the written suicide news stories with the WHO media guidelines about appropriate suicide reports.

Hence, this study focuses on responsible reporting on suicide and presents the findings from an experiment in which the effects of written and audio-visual awareness material on journalism students' actual news writing were put tested. Moreover, we discuss the beneficial consequences of using instructive awareness videos as a supplement to the already widely used text-based media guidelines. To enable an easy adaption by suicide experts globally, we provide detailed instructions of how to produce audiovisual awareness material using a lowbudget production process needing no expert knowledge.

#### **METHOD**

To generate knowledge about how media guidelines can be promoted within the profession of journalism in a way that media guidelines show the most positive impact on journalists' suicide reports (i.e., reduction of harmful elements and promotion of helpful elements within suicide reporting), we conducted a web-based experiment with journalism students in Germany. The aim of the study was to test whether suicide awareness material influences actual news writing of a suiciderelated story. Participants were randomly allocated to one of three groups: They were either exposed to written, audio-visual awareness material, or to a control group. Afterwards, participants were presented with facts of a news event (i.e., a suicide) and they were asked to write a complete

news suicide story. Afterwards, written stories were content-analyzed with a special focus on negative and positive content elements.

# **Participants**

As there is no mailing list including all journalism students in Germany, participants were recruited in a two-step procedure. First, we compiled a list of 70 journalism-related programs at universities, colleges, and private journalism schools (university or college level) in Germany. In a second step, the coordinators of those programs were contacted by email and provided the invitation letter to their students by distribution lists and social media. Emails were sent out to a total of 15 university programs, 25 college classes, and 30 journalism schools. We did not apply any specific exclusion criteria for recruitment. A total of 495 individuals clicked on the link to the survey. Unfortunately, 417 individuals did not provide data to all relevant variables (i.e., they did not complete the survey; most left the survey on the first page). We did not obtain information on the reasoning behind the dropout. A total of 78 individuals provided complete data between the February 2 and March 9, 2016. Of these, 69% were female. The participants ranged in age from 18 to 52 (M = 23.95, SD = 5.46). The majority of the final sample (66%) has at least a high school diploma and is still studying within an undergraduate journalism program, whereas 33% already hold a university degree as many journalism programs in Germany are postgraduate programs. Of the participants, 77% indicated they already had working experience as journalists in the past and 52% of the sample indicated being currently employed in the journalism field. The majority (69%) mentioned having already heard about the Werther effect.

## **Experimental Manipulation**

Participants were randomly allocated to one of three conditions. Journalism students in the video condition (n = 26) viewed a short, self-produced awareness video about how to report on suicide with a total length of 234 s. The video depicts a suicide expert (Sebastian Scherr) who explains the media guidelines on how to report on suicides. In the video, the expert directly speaks to the audience (i.e., looks and speaks into the camera) and explains the media guidelines and the recommended actions therein in the same order as in the written version of the guidelines. The video was produced for the present study following a low-budget approach. It was intended to allow easy reproduction of the video, in different countries, in different languages, by local suicide prevention experts. Appendix A provides a detailed description of the production process and the equipment necessary to replicate the film material exactly as used in this study. All suicide prevention professionals need is a filming device.

Participants allocated to the text condition (n=23) were exposed to the same information. The content parallels the information presented in the video and resembles widely used text-based awareness material. Individuals allocated to the control condition (n=29) were not exposed to media guidelines or any other kind of suicide report awareness material before the writing task.

## Facts of the Event

Journalism students were provided with a total of 13 "fact blocks," each of which described different aspects of a fictitious suicide. The facts included details about the person (not a celebrity) who dies by suicide, details about the site of the suicide, further information about the site of the suicide that describe it as a mystical

place, moreover, two vox pops—one of a psychiatrist who has been at the site where the suicide happened and explains the psychological development of individual suicidality, and a second one of a local whose neighbor once faced a similar situation, but has overcome the suicidal crisis, as well as reported local rumors about the suicide incident. Participants were instructed to carefully read these facts and then to formulate a headline (eight words max) and a body of text (250 words max) that is based on the facts.

## Responsible Reporting on Suicide

Because responsible reports have two dimensions (i.e., avoidance of negative content elements and facilitation of positive content elements), we used the word count of positive as well as negative content elements as the main dependent variable of the present study. Each sentence of a text was marked red (green) when the sentence included at least one negative (positive) content element. For example, if one sentence describes the method used, then the number of words of the whole sentence was marked red and the word count was coded. We summed up all words of the positive (negative) sentences to form the main outcomes related to positive and negative content elements. If a sentence contained positive as well as negative content elements, the number of words of this sentence was not used for either of the two measures. One coder (Florian Arendt) coded all texts (total word count: M = 154 words, SD = 70.39words, range = 16-308). A second coder (Sebastian Scherr) coded half of the sample to assess inter-coder reliability (Krippendorff's a). Word count of negative content elements  $(M = 50.14, SD = 34.52, \alpha = .94)$ as well as word count of positive content elements  $(M = 80.40, SD = 50.73, \alpha = .98)$ were measured in a highly reliable way. Both measures of RRS were unrelated, r(76) = .07, p = .56. However, both the

positive content element measure, r(76) = .80, p < .01, as well as the negative content elements measure, r(76) = .61, p < .01, were related to total word count. Due to these correlations and the large range in total word count, we decided to use total word count as a covariate in statistical analyses.

For explorative purposes, we additionally coded specific dimensions of RRS as indicated by the media guidelines for reporting on suicides: Method, location, hotspot, romanticizing, education of the public, contact information, and model protagonist with an alternative crisis solution. All these specific dimensions are mentioned by international media guidelines (see above). The coding schema can be found in Appendix B.

#### Ethics

Taking part in the experiment was voluntary and anonymous, and journalism students could refuse to take part or withdraw at any time. Participants were finally debriefed. In addition, we provided contact information for telephone counseling service and the website of a crisis intervention center in the final part of the study. To increase the dissemination of media guidelines, we provided the possibility that participants could save the guidelines for their own use.

## **RESULTS**

## Randomization Check

First, we tested group equivalence using F-tests for continuous measures and chi-square tests for categorical measures. Table 1 shows that there were no significant group differences with regard to age, sex, education, or for knowledge of a Werther Effect.

## Hypothesis Testing

H<sub>1</sub> assumed that exposure to awareness material positively contributes to

TABLE 1. Demographic Information about Participants and Specific Knowledge about The Werther Effect

	Control ( <i>n</i> = 29)	Text (n = 23)	Video	Statistical difference between experimental groups		
Participants			(n=26)	Test	Þ	
Age	24(5.9)	24(4.5)	24(5.9)	F(76) = 1.2	.887	
Sex (n female)	19	17	17	$\chi^2 = 0.433$	.805	
Education (n 'high school')	20	14	17	$\chi^2 = 2.33$	.676	
Working experience (n 'yes')	18	9	13	$\chi^2 = 2.70$	.259	
Werther knowledge (n 'yes')	19	16	18	$\chi^2 = 0.271$	.873	

*Note.* We used *F*-tests for continuous measures and chi-square tests for categorical measures to assess possible differences between participants' socio-demographics and knowledge and experimental condition.

responsible reporting. To test this assumption, data were subjected to a 3 (awareness material exposure: none, text, video) × 2 (type of content element: negative, positive) mixed model ANOVA with awareness material exposure as a between-subject factor and type of content element as a within-subject factor. We used total word count as a covariate to control for individual differences in text length.

The analysis did not reveal main effects of awareness material exposure, F(2, 74) = 1.13, p = .33,  $\eta^2 = .03$ , and type of content element, F(1, 74) = 0.98, p = .33,  $\eta^2 = .01$ . However, as expected, the analysis revealed a significant interaction effect, F(2, 74) = 3.45, p = .04,  $\eta^2 = .09$ . Figure 1 visualizes this effect by presenting the prevalence of positive and negative content elements as a

<sup>1</sup>We also conducted additional analyses that include working experience as an additional factor: We tested whether or not the effect obtained in the main analysis section (regarding  $H_1$ ) was dependent on participants' working experience. A total of 40 participants indicated current work within the field of journalism (68% female; M=25 years, SD=7.0). We re-ran the mixed model ANOVA outlined above and additionally included working experience (no/yes) as an additional (third) independent variable. Importantly, there was no significant three-way interaction. This indicates that working experience did not influence the size of the effect of awareness material on responsible reporting, F(2, 70) = 1.22, p = .30,  $\eta^2 = .03$ .

function of experimental condition. As indicated by two additional one-way ANOVA's, awareness material decreased the word count of negative content elements, F(2, 74) = 3.51, p = .04,  $\eta^2 = .09$ , and increased the word count of positive content elements, F(2, 74) = 3.12, p = .05,  $\eta^2 = .08$ .

Moreover, we formulated a research question (RQ<sub>1</sub>) to explore whether audiovisual material elicits stronger beneficial effects on RRS than text-based material. When subjected to a 2 (awareness material exposure: none, video) × 2 (type of content element: negative, positive) mixed model ANOVA with total word count as a covariate, the analysis revealed a highly significant interaction effect, F(1, 52) = 12.70, p = .001, $\eta^2 = .20$ . Conversely, when subjected to a 2 (awareness material exposure: none, text)  $\times$  2 (type of content element: negative, positive) mixed model ANOVA with total word count as a covariate, the analysis did not reveal a significant interaction effect, F(1, 49) = 0.66, p = .42,  $\eta^2 = .01$ . Thus, we conclude that the size of the interaction effect is driven by the audio-visual condition.

## Additional Analyses

For explorative purposes, we investigated awareness materials' impact on specific dimensions of responsible reporting on suicide. Table 2 presents the results of

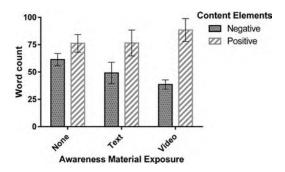


FIGURE 1. Positive and negative content elements as a function of experimental condition (i.e., awareness material exposure). An improvement of responsible reporting on suicides requires a decrease in negative content elements and an increase in positive content elements. Error bars indicate the standard error of the mean. The means are based on raw data without adjustments for the covariate.

this analysis. We found that exposure to awareness material reduced the likelihood of providing a detailed description of the method and location. In addition, exposure reduced the frequency of mentioning suicide epidemics and reduced the likelihood of

TABLE 2. Effect of Awareness Material Exposure on Specific Dimensions of Responsible Reporting on Suicide

	% of articles within each experimental group providing the dimension			Strength of association and test of statistical significance	
Specific dimension	Control (n = 29)	Text (n = 23)	Video (n = 26)	Cramer's	P
Headline:					
Method*	0	4	0	_	_
Location*	66	52	35	.281	.015
Hotspot	24	0	8	.318	.019
Body of the text:					
Method*	76	35	38	.308	.005
Location*	97	74	73	.333	.002
Hotspot	52	17	12	.405	.002
Romanticizing	24	9	0	.322	.018
Educate the public about suicide	79	78	85	.070	.827
Contact information on where to seek help*	14	26	27	.170	.341
Model with an alternative crisis solution	41	39	62	.201	.208

Note. We used cross-tab analysis to assess the strength of association between awareness material exposure and specific dimensions of responsible reporting on suicides. Cramer's V is based on the complete cross-tabs (i.e., all coded categories, see Appendix B). The strength of association was not calculated for the dimension "method (headline)" because the method was mentioned only one time in all 78 news texts.

<sup>\*</sup>Prevalence of both detrimental categories in negative content elements and both beneficial categories in positive content elements.

romanticizing descriptions. None of the coefficients related to positive content elements achieved significance although they point in the right (i.e., beneficial) direction. Nevertheless—without the intention to over-interpret this exploratory finding—regarding the descriptive statistics, there is evidence to suggest that the video material will yield more positive elements within the suicide stories because audio-visual material elicited the highest prevalence of all positive content elements. In sum, audio-visual material elicited an increase in reporting of positive elements as indicated by the ANOVAs presented above.

#### DISCUSSION

To the best of our knowledge, this is the first study that provides comparable empirical evidence for the effectiveness of different ways of presenting suicide awareness material (text- or video-based) within the profession of journalism. More specifically, our analyses indicate that awareness material exposure helped to improve RRS with the awareness video showing the strongest effects. These findings theoretically build upon the social-cognitive theory (Bandura, 1986, 2001) as well as on numerous empirical findings showing that media reports can be both harmful and helpful with regard to the global imperative of suicide prevention (WHO, 2014).

Against the backdrop of research findings on the Werther effect (Niederkrotenthaler et al., 2012; Phillips, 1974; Stack, 2000, 2005), the emphasis within the media guidelines about how to report on suicide seems logical: the aim is to avoid harmful elements within suicide news articles. Compared to that, the preventive potential of suicide news articles as indicated by research findings on the Papageno effect (Etzersdorfer, Voracek, & Sonneck, 2004; Niederkrotenthaler et al., 2010) is not yet fully used. Hence,

with regard to suicide prevention, the time has come for journalists to not only avoid negative content, but also actively report on positive content elements to use the preventive potential of their work for the society as a whole and for suicidal individuals who are most vulnerable to potentially harmful media effects (see Scherr, 2016).

### Limitations

Of course, the present study has several limitations. The first limitation is related to the sample we utilized and that may elicit external validity concerns. We did not test the effect of awareness material in a sample of experienced journalists. Although participants were journalism students and more than half of them had professional journalistic experience, our study cannot properly reflect the influences of time pressure on journalistic work. Nevertheless, additional analyses (see footnote) revealed that working experience did not significantly moderate the influence of awareness material on journalists' responsible reporting. Moreover, we cannot rule out the impact of specific interest in the topic of the study on the motivation to participate. And, it might be the case that journalists are especially open-minded and willing to include the information in the awareness material in their journalistic work. To clarify these shortcomings, further research is surely needed. Second, the scenarios the suicide story was supposed to be based on, were pre-selected by the researchers and were not collected by the journalism students based on their own research routines. Again, time restrictions might influence self-researched information about a suicide and facts might also individually differ from the ones that were pre-selected for the study. Specifically, it is unlikely to use both a psychiatric practitioner and a common man as a quoted exemplar within

a final news article about a suicide, mostly due to space restrictions or other editing during the publication process. Moreover, the results have to be interpreted in light of the fact that some of the positive elements are easy to implement (e.g., the telephone number of a suicide prevention hotline) in daily routine news reporting, while others are more difficult to obtain and implement in a suicide news article (e.g., quotes from a suicide expert). Nevertheless, as a first step, it is essential to get deeper insights about the contributing factors that enhance the willingness of journalists to implement positive elements in general, because without the willingness to implement positive elements within suicide news reports, any further differentiation of the accessibility of the information is obsolete. This leads to the final major restriction of the present study: We were not able to reflect editorial decisions or any other kind of editorial policy within the process of publishing news stories about suicides, such as, for example, to not report about suicides at all with maybe exceptions for celebrity suicides. In the context of the present study, the journalists had the chance to report unrestrictedly about the described suicide. And finally, as we decided to produce an easy to reproduce awareness video for suicide prevention, for example, in developing countries, and have a sample of journalism students, it might be that some of the participants have video production and/or editing experience and thus feel less satisfied with the overall appeal of the video.

#### Conclusions

Despite the limitations, the present study provides compelling empirical evidence for the effectiveness of text- and video-based awareness material about how to responsibly report on suicides within a sample of journalism students. The study shows that awareness material can help journalists report more responsibly about suicides. Both text and video awareness material reduce the negative elements (i.e., information that is likely to facilitate copycat suicides) and, most importantly, video awareness material increased the number of positive elements (i.e., suicide prevention information) within suicide news reports. It seems that video awareness material, in which media guidelines are presented by an expert, might be especially able to influence journalists to use more suicide prevention elements within suicide news reports (e.g., to educate the public about suicide or to show a role model offering alternative solutions to suicidal crises). This is especially important when considering changing media environments: Audiovisual material can be easily disseminated via the Internet in a very cost-effective manner. As all of these findings could be observed using easy-to-reproduce text or video material that has all been produced with low-budget equipment and free-touse software, the preventive potential of suicide awareness material described here, can generally be useful for the progress of the journalistic profession and suicide prevention around the globe.

## **AUTHOR NOTE**

Sebastian Scherr, Department of Communication Studies and Media Research, LMU Munich, Munich, Germany.

Florian Arendt, Department of Communication Studies and Media Research, LMU Munich, Munich, Germany.

Markus Schäfer, Department of Communication, Johannes Gutenberg-University, Mainz, Germany.

The authors wish to thank Dr. Christina Peter (LMU Munich) for helping to conduct the study.

Correspondence concerning this article should be addressed to Sebastian Scherr, Department of Communication Studies and Media Research, LMU Munich, Oettingenstr. 67, Munich 80538, Germany. E-mail: scherr@ifkw.lmu.de

## **REFERENCES**

- Bandura, A. (1986). Social foundations of thoughts and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology*, 3(3), 265–299. doi: 10.1207/S1532785XMEP0303\_03
- Blood, R. W., & Pirkis, J. E. (2001). Suicide and the media: Part III: Theoretical issues. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 22(4), 163–169. doi: 10.1027//0227-5910.22.4.163
- Bohanna, I., & Wang, X. (2012). Media guidelines for the responsible reporting of suicide. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 33(4), 190–198. doi: 10.1027/0227-5910/a000137
- Etzersdorfer, E. (2008). Medienleitlinien für die Berichterstattung von Suizidhandlungen: Stand des Wissens, zukünftige Fragestellungen. In A. Herberth, T. Niederkrotenthaler & B. Till (Eds.), Suizidalität in den Medien: Interdisziplinäre Betrachtungen [Suicidality in the media: Interdisciplinary contributions] (pp. 207–216). Wien: LIT.
- Etzersdorfer, E., Voracek, M., & Sonneck, G. (2004). A dose-response relationship between imitational suicides and newspaper distribution. *Archives of Suicide Research*, 8(2), 137–145. doi: 10.1080/13811110490270985
- Fotheringham, M. J., Owies, D., Leslie, E., & Owen, N. (2000). Interactive health communication in preventive medicine: Internet-based strategies in teaching and research. *American Journal of Preventive Medicine*, 19(2), 113–120. doi: 10.1016/S0749-3797(00)00188-4
- Fu, K.-W., Chan, Y.-Y., & Yip, P. S. F. (2009). Testing a theoretical model based on social cognitive theory for media influences on suicidal ideation: Results from a panel study. *Media Psychology*, 12(1), 26–49. doi: 10.1080/15213260802669441
- Fu, K.-W., & Yip, P. S. F. (2008). Changes in reporting of suicide news after the promotion of the WHO media recommendations. Suicide and Life-Threatening Behavior, 38(5), 631–636. doi: 10.1521/suli.2008.38.5.631
- Maloney, J., Pfuhlmann, B., Arensman, E., Coffey, C., Gusmão, R., Poštuvan, V., . . . Schmidtke, A. (2013). Media recommendations on reporting

- suicidal behaviour and suggestions for optimisation. *Acta Psychiatrica Scandinavica*, 128(4), 314–315. doi: 10.1111/acps.12131
- Michel, K., Frey, C., Wyss, K., & Valach, L. (2000). An exercise in improving suicide reporting in print media. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 21(2), 71–79. doi: 10.1027//0227-5910.21.2.71
- Niederkrotenthaler, T., Fu, K.-W., Yip, P. S. F., Fong, D. Y. T., Stack, S., Cheng, Q., & Pirkis, J. E. (2012). Changes in suicide rates following media reports on celebrity suicide: A metaanalysis. *Journal of Epidemiology and Community Health*, 66(11), 1037–1042. doi: 10.1136/jech-2011-200707
- Niederkrotenthaler, T., & Sonneck, G. (2007). Assessing the impact of media guidelines for reporting on suicides in Austria: Interrupted time series analysis. Australian and New Zealand Journal of Psychiatry, 41(5), 419–428. doi: 10.1080/ 00048670701266680
- 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, 234–243. doi: 10.1192/bjp.bp.109.074633
- Nutt, R., Kidd, B., & Matthews, K. (2014). Assessing the adherence to guidelines of media reporting of suicide using a novel instrument: The "risk of imitative suicide scale" (RISc). Suicide and Life-Threatening Behavior. doi:10.1111/sltb.12137
- Phillips, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review*, 39, 340–354. doi: 10.2307/2094294
- Pirkis, J. E., & Blood, R. W. (2001). Suicide and the media: Part I: Reportage in nonfictional media. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 22(4), 146–154. doi: 10.1027//0227-5910.22.4.146
- Pirkis, J. E., Blood, R. W., Beautrais, A., Burgess, P. M., & Skehan, J. (2006). Media guidelines on the reporting of suicide. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 27(2), 82–87. doi: 10.1027/0227-5910.27.2.82
- Pirkis, J. E., Dare, A., Blood, R. W., Rankin, B., Williamson, M., Burgess, P., & Jolley, D. (2009). Changes in media reporting of suicide in Australia between 2000/01 and 2006/07. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 30(1), 25–33. doi: 10.1027/0227-5910.30.1.25

- Schäfer, M., & Quiring, O. (2015). The press coverage of celebrity suicide and the development of suicide frequencies in Germany. *Health Communication*, 30(11), 1149–1158. doi: 10.1080/10410236. 2014.923273
- Scherr, S. (2016). Depression Medien Suizid: Zur empirischen Relevanz von Depressionen und Medien für die Suizidalität [Depression Media Suicide: On the empirical relevance of depression and media for suicidality]. Wiesbaden, Germany: Springer VS.
- 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
- Skehan, J., Greenhalgh, S., Hazell, T., & Pirkis, J. (2006). Reach, awareness and uptake of media guidelines for reporting suicide and mental illness: An Australian perspective. *International Journal of Mental Health Promotion*, 8(4), 28–34. doi: 10.1080/14623730.2006.9721749
- Stack, S. (2000). Media impacts on suicide: A quantitative review of 293 findings. Social Science Quarterly, 81(4), 957–971.
- Stack, S. (2005). Suicide in the media: A quantitative review of studies based on nonfictional stories. Suicide and Life-Threatening Behavior, 35(2), 121–133. doi: 10.1521/suli.35.2.121.62877
- Tatum, P. T., Canetto, S. S., & Slater, M. D. (2010). Suicide coverage in U.S. newspapers following the publication of the media guidelines. *Suicide and Life-Threatening Behavior*, 40(5), 524–534. doi: 10.1521/suli.2010.40.5.524
- Till, B., Sonneck, G., Baldauf, G., Steiner, E., & Niederkrotenthaler, T. (2013). Reasons to love life. Effects of a suicide-awareness campaign on the utilization of a telephone emergency line in Austria. *Crisis*, 34(6), 382–389. doi: 10.1027/0227-5910/a000212
- Till, B., Strauss, M., Sonneck, G., & Niederkrotenthaler, T. (2015). Determining the effects of films with suicidal content: A laboratory experiment. *The British Journal of Psychiatry*, 207, 72–78. doi: 10.1192/bjp.bp.114.152827
- Tully, J., & Elsaka, N. (2004). Suicide and the media: A study of the media response to 'Suicide and the media: The reporting and portrayal of suicide in the media: A resource'. Retrieved from http://www.health.govt.nz/publication/suicide-and-media-study-media-response
- Webb, T. L., Joseph, J., Yardley, L., & Michie, S. (2010). Using the Internet to promote health behavior change: A systematic review and meta-analysis

- of the impact of theoretical basis, use of behavior change techniques, and mode of delivery on efficacy. *Journal of Medical Internet Research*, 12(1), e4. doi: 10.2196/jmir.1376
- WHO. (2008). Preventing suicide: A resource for media professionals. Geneva: WHO.
- WHO. (2014). Preventing suicide: A global imperative. Retrieved from http://www.who.int/entity/mental\_health/suicide-prevention/exe\_summary\_english.pdf?ua=1
- WHO. (2015). Global health observatory (GHO) data: Age-standardized suicide rates. Retrieved from http://www.who.int/gho/mental\_health/suicide\_rates/en/

### APPENDIX A

- Equipment used to shoot the awareness video:
  - Camera, external microphone, and film editing software (numerous freeware software available).
- Description of the screenplay (the full video can be obtained upon request):
  - Introduction scene (20 s): Narrator concisely introduces the expert to be seen in the video as an expert of reporting on suicides in the media, the current working position and why responsible reporting about suicide is important at all.
  - Opening scene (40 s): Expert is sitting at a desk, explains the importance of media guidelines for journalistic daily working routines and the general relevance of journalists for suicide prevention.
  - Explanation of the media guidelines (165 s): Expert is standing in front of a bookshelf and talks about every single element of media guidelines:
    (1) Avoid attention on suicides, (2) avoid "romanticizing," "glamourizing," or "heroicizing" of suicides, (3) avoid detailed descriptions of suicide methods, (4) avoid detailed descriptions of the suicide site, (5) particular

- awareness when reporting about celebrity suicides (highest risk for imitative behaviors due to identification potential), (6) presenting alternative expedients from a suicidal crisis.
- Closing titles (9 s): "There is scientific evidence that media guidelines will help to prevent suicides, if journalists consider them in their suicide reports." (5 s), and "Journalists should therefore carefully consider media guidelines whenever reporting on suicides" (4 s).

#### APPENDIX B

Variables of the content analysis of the written texts. Krippendorff's Alpha was calculated for the reliability test.

## 1. HEADLINE

Headline includes method. [no  $\alpha$ ]

0 = Method not mentioned

- 1 = mentioned (unspecific; e.g., "drug" or "malaria drug")
- 2 = mentioned (specific; e.g., "Chloroquine and diazepam"; information act as a full "shopping list")

This variable was a constant in the sample of the reliability test (and nearly a constant in the whole sample). We did not calculate a reliability coefficient.

Headline includes location of suicidal act.  $[\alpha = 0.70]$ 

0 =Location not mentioned

- 1 = mentioned (<u>unspecific</u>; e.g., "lakeside" or "in the village Puttning")
- 2 = mentioned (specific: "Hofstätter See" or a combination of details such as "lakeside next to the village Puttning")

Headline indicates a "hotspot" or "epidemic" [ $\alpha = 1.00$ ]

0 = No

1 = Yes (e.g., "Suicide wave")

# 2. BODY OF THE TEXT (ARTICLE)

Body of the text provides detailed information on method [ $\alpha = 0.95$ ]

0 = Method not mentioned

- 1 = mentioned (unspecific; e.g., "drug" or "malaria drug")
- 2 = mentioned (specific; e.g., "Chloroquine and diazepam"; information act as a full "shopping list")

Body of the text provides detailed information on location [ $\alpha = 0.71$ ]

0 = Location not mentioned

- 1 = mentioned (<u>unspecific</u>; e.g., "lakeside" or "in the village Puttning")
- 2 = mentioned (specific: "Hofstätter See" or a combination of details such as "lakeside next to the village Puttning")

Body of the text indicates a "hotspot" or "epidemic" [ $\alpha = 0.81$ ]

0 = No

1 = Yes

Does "romanticize," "glamourize," or "heroicize" the protagonist who died by suicide  $[\alpha = 0.64]$ 

0 = No

1 = Yes

Takes the opportunity to educate the public about suicide [ $\alpha = 0.94$ ]

0 = No

1 = Yes

Provides contact information on where to seek help [ $\alpha = 0.79$ ]

0 = No

- 1 = Yes, without direct appeal (e.g., "012 34567")
- 2 = Yes, with direct appeal (e.g., "You can find...")

Provides a model protagonist with an alternative crisis solution  $[\alpha = 0.95]$ 

0 = No

1 = Yes.