

How Do Recommended Elements in Suicide News Coverage Work? An Investigation of the Effect of Responsible Reporting and Readers' Reflectiveness on Suicide Prevention

Youngkee Ju^a, Sebastian Scherr^{id b,c}, and Michael Prieler^{id a}

^aThe Media School, Hallym University; ^bCenter for Interdisciplinary Health Research, University of Augsburg; ^cDepartment of Media, Knowledge, and Communication, University of Augsburg

ABSTRACT

To examine the effect of positive elements in suicide reporting guidelines, we assessed how responsible reporting on suicide (RRS) affect cognitive and intentional responses. We also investigated the moderating role of audience reflectiveness in news processing. Here, 308 individuals participated in a single-factor between-subject experiment conducted in South Korea. We manipulated the number of positive RRS features in news articles by adding suicide statistics, contact information for helplines, and efficacy-enforcing information. Overall, news articles containing multiple RRS elements had a stronger impact on behavioral intentions to help others in a suicidal crisis than a basic news article without RRS elements. Interestingly, reflectiveness had a stronger influence on individuals who read a suicide news report having the most RRS elements relative to those who read suicide news without any RRS elements, signifying an indirect impact of suicide news on intentions to help. The implications of this RRS effect identified are discussed in terms of suicide prevention.

Suicide is a global issue. Worldwide, one person dies by suicide every 40 seconds (World Health Organization [WHO], 2021). Thus, development of evidence-based interventions to prevent suicide is urgently needed. Multiple studies reported that news media can have negative influences on individuals' attitudes toward suicide and suicidal behaviors (Fu & Yip, 2009; Niederkrotenthaler et al., 2020; Pirkis & Blood, 2001; Stack, 2003, 2009). For example, a meta-analysis of 31 studies confirmed that the media can cause additional suicides after reporting the death of a celebrity or even of non-celebrities, which substantiates the Werther effect that manifests as an increase in suicides after reports of the suicide of a well-known figure (Niederkrotenthaler et al., 2020).

The best available intervention to resolve the harmful effects of media, or the Werther effect, would be the implementation of guidelines for responsible reporting. In addition to preventing the harmful effect, media reporting can produce the Papageno effect, which refers to "any suicide-protective impact of media reporting" that results in a decrease in the number of suicides (Niederkrotenthaler et al., 2010, p. 234). Guidelines for responsible reporting include recommendations for journalists to follow such as omitting detailed information about the suicide method or location and avoiding simplification of the causes of death (Niederkrotenthaler et al., 2020). A long list of recommendations has also been described in multiple publications (Armstrong et al., 2018; Chun et al., 2018; Easson et al., 2014; Lee et al., 2014; Niederkrotenthaler et al., 2010; Tatum et al., 2010; World Health Organization [WHO], 2017). Several content analyses examined the quality of suicide news measured against

recommendations in local reporting guidelines. For example, more than half of news articles mentioning suicide that were published in India (Armstrong et al., 2018) and South Korea (Lee et al., 2014) were found to oversimplify the cause of suicide even though reporting guidelines discourage inclusion of any information related to cause.

These content analyses are a valuable source of information about the status quo of suicide reporting. However, much less is known about the impact of positive elements of suicide reporting on news audiences. Several empirical studies investigated the effect of guidelines for suicide reporting (Anestis et al., 2015; Fu & Yip, 2008; Pirkis et al., 2009; Sumner et al., 2020; Williams & Witte, 2018). For example, the quality of suicide news coverage in Australia improved over the course of two 12-month periods after reporting guidelines were released (Pirkis et al., 2009). Furthermore, news stories that followed the best practice of safe-reporting were more likely to be shared on Facebook (Sumner et al., 2020). On the other hand, news stories that did not follow suicide reporting guidelines had no direct effect on audiences in some experimental studies (Anestis et al., 2015; Williams & Witte, 2018). However, these experimental studies did not investigate the effect of positive elements in suicide news or control for simultaneous influences of negative news features that did not observe recommendations listed in suicide reporting guidelines.

Some studies have examined the effect of positive elements in suicide news (Niederkrotenthaler & Till, 2020; Niederkrotenthaler et al., 2010). A recent study showed that after reading a story concerning an individual coping with

suicidal thoughts, people who had suicidal thoughts had a higher Reason for Living Inventory (RFLI) score than those who read a news story focusing on a topic other than suicide (Niederkröthaler & Till, 2020). Furthermore, a content analysis showed that articles on individuals' coping strategies were negatively associated with actual suicide rates (Niederkröthaler et al., 2010).

The present study expands upon these findings by examining how audiences are affected by inclusion of positive elements recommended in suicide reporting guidelines. We tested the effect of an educational news story that includes elements of responsible reporting on suicide (RRS) on knowledge and behavioral intentions regarding suicide. Considering that the presence of more RRS elements may heighten the likelihood of beneficial effects, we varied the experimental conditions to examine how different numbers of RRS elements affected audience responses. As such, this study compares the impact of a simple Papageno story to a Papageno story that is "enhanced" by additional information representing RRS elements. Here, a Papageno story refers to a news article that potentially induces the Papageno effect through suicide news that exerts positive media influences on audiences and potentially prevents suicides (Niederkröthaler et al., 2010).

We further examined the role of reflectiveness as a potential catalyst for the positive effects of exposure to suicide news with RRS elements. Reflectiveness is a "cognitive component of eudaimonic appreciation" of media contents (Bartsch et al., 2020, pp. 805–806). Eudaimonic appreciation originates from pursuing eudaimonic happiness achieved through experiences of *meaning* and *purpose* rather than *pleasure* (Ryan & Deci, 2001). Reflective processing as part of broader meaning-making for audiences exposed to media content is characterized by a slow, deliberative and interpretive process. Reflective processing is typically measured using participants' self-reported agreement with perceptions of media content that made them "reflective," "contemplative," and "thoughtful" (Bartsch et al., 2020; Cupchik, 1994).

In this context, audience reflectiveness might moderate the influence of positive news elements of RRS, and therefore, alter outcomes that are desirable from a suicide prevention perspective. The current study thus not only examines whether inclusion of positive RRS news elements can improve suicide-related outcomes, but also addresses the role of audience reflectiveness when exposed to such suicide news.

Method

Study design and manipulation

We conducted a single-factor between-subject experiment, in which we varied the amount of RRS elements. To maximize the external validity of the news stories used in this experiment, authentic news stories in a Korean study context were used with application of fractional factorial design. Specifically, the study had five experimental conditions: a base condition in which a Papageno story is presented without additional information, three more conditions with information progressively added to the base condition, and a control condition without a news story. Additional details about these conditions are provided below. As

the main dependent variable, we measured the behavioral intention to help those with suicidal thoughts. Reflectiveness was also measured as a moderator for media effects of suicide news. The study protocol was approved by the IRB board at the lead author's institution (No. HIRB-2020-075).

It is notable that the Papageno story is not a regular suicide news story, and is likely to evoke a suicide-preventive Papageno effect. For this study, we developed and altered a fictitious interview, in which a female suicide expert who works at a clinic for suicidal people was the main subject. The expert explains that she herself had been in a suicidal crisis, and the main body of the story conveyed how she overcame her own crisis, various misconceptions about suicide, and what-to-do information for individuals are either themselves at risk of suicide or who have friends at suicidal risk. We used this type of interview since lived experience is likely to help people coping with their own suicidal crisis (Till et al., 2018). Moreover, most evidence for a Papageno effect is from studies that used personal stories of lived experiences of suicidality (Arendt et al., 2016; Niederkröthaler & Till, 2020; Till et al., 2018). One potential mechanism for why lived experience is effective is that it can change social norms (e.g., "doctors can be suicidal, too" or "suicide is not a sign of weakness, doctors can also be suicidal").

We developed four versions for the basic format of the news story by adding new information. The first version was simply the basic format, which starts with the first paragraph that introduces the meaning of suicide crisis and notes that the reporter had talked with an expert on suicide prevention. The second paragraph conveys the reporter's introduction of the expert to the readers and a question on whether the expert herself has had an experience of suicidal ideation. The third paragraph contains the expert's answer that tells about how she was herself in suicidal crisis and emerged from it with the help of an assisting agency. Then, the reporter poses questions about two situations: an individual facing a similar crisis and an individual meeting a person who expresses his or her suicidal ideation. The expert provides answers to questions about each situation. For the person experiencing suicidal crisis, the expert suggests that the individual talk to family or friends, use helplines or consult with a doctor. For the person who meets someone in suicidal crisis, the expert recommends that this person should listen and sympathize. Finally, the reporter asks about a few misconceptions about suicide, and the expert explains the basis for these misconceptions.

The second version adds suicide statistics at the beginning of the interview, indicating that the number of deaths by suicide in the previous year was much larger than deaths due to car accidents. The third version adds contact information for helplines that those in a suicidal crisis can use. The contact information appears at the end of the text for the second version. The fourth version adds statistics for how many people overcame their suicidal crisis by seeking professional help. The control group did not read any news story.

Participants and procedure

To recruit the participants, 1,219 panel members of Korea Research, a professional survey company in Korea, were

invited and 741 individuals participated. Among the initial participants, 179 did not complete the experiment and 248 potentially vulnerable individuals were excluded at the beginning of the study. Thus, 308 individuals (155 males and 153 females) participated in the study. Participants were between 20 and 69 years-old and were randomly assigned to one of the five experimental conditions into which 60 to 63 individuals were allocated in a way that males and females were equally distributed across each experimental group. All participants were incentivized with 7,000 won (about \$6) for their participation; funds were delivered by the survey company.

Individuals were informed about the purpose of the study (i.e., the effect of suicide prevention elements in news coverage) before the study began and before informed consent was obtained. After obtaining informed consent, the experiment was administered online. At the beginning of the experiment, the Beck Hopelessness Scale was used to assess individual suicidality. The Beck hopelessness scale has been used as a screening tool for suicidality in other studies (e.g., Arendt et al., 2018), based on previous evidence (Beck et al., 1990; McMillan et al., 2007) showing that this scale is a reliable predictor of suicidal behavior. Individuals having values ≥ 34 were excluded (Beck et al., 1974). After answering questions about socio-economic status, individuals in one of the experimental groups read the suicide news report assigned to them and completed questions on the variables under investigation.

Measures

Independent variables

To investigate whether and how positive elements of suicide reporting affect suicide prevention, we varied the intensities of RRS elements and measured reflectiveness as an indicator for processing of the news article.

Intensity of RRS elements. This main factor refers to the number of positive elements for responsible reporting on suicide (RRS) included in suicide news reports. We began with the no-news condition, and subsequently added up to four RRS elements in order of: (a) general educational content on suicide in the main body of news story (e.g., lived experience of the expert who overcame her own suicidal crisis, what-to-do information for individuals who face a suicidal crisis themselves or for those who meet a person in a suicidal crisis, and misconceptions about suicide); (b) statistics for deaths by suicide in the previous year that are higher than that for deaths by car accident; (c) contact information for helplines; and (d) encouragement to use assistance by reporting that an increasing number of beneficiaries overcame a suicidal crisis by seeking professional help. Given that not all elements added to the news article will have an equally strong impact on audiences, we assumed no linear effects and examined the data in terms of group differences.

Reflectiveness. For assessing reflectiveness, the participants read the news story and then used a seven-point Likert scale (1 = *not at all* to 7 = *very much*) to express whether they found the article “meaningful,” “moving,” “thought-provoking,” “will stick with me for a long time,” “left me with a lasting

impression” or that they “will never forget this article.” The inter-item consistency was high (Cronbach's $\alpha = .87$) and the scores for the six items were averaged.

Dependent variables

To examine whether news reporting has a positive impact on audiences (e.g., increase in resources for coping with a suicidal risk) and if this positive impact can be traced back to RSS exposure, we used two measures based on those reported by Arendt et al. (2018) for RCTs focusing on responses to media materials.

Suicide prevention knowledge. Suicide prevention knowledge (SPK) is a cognitive measure that can be one type of coping resource (Ramberg et al., 2016). We used 10 questions to measure suicide prevention knowledge using information contained in news stimuli. For example, when the statement “More than 50 thousand people die by suicide every year” was given, the participants were asked to respond “yes” (1) or “no” (0). Stimuli for the other four experimental conditions contained relevant information and the participants’ responses were scored according to their correctness and averaged to obtain the knowledge score.

Behavioral intention to help those with suicidal thoughts.

Behavioral intention is a variable that can serve as an indicator of an individual’s willingness to help others in a suicidal crisis. We measured behavioral intention by providing participants with an imaginary situation in which they happen to meet a person who confesses that he is in a desperate situation and also uses the word “suicide.” They were asked to indicate what they would do in this situation using a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*) for each of four potential responses: “say goodbye and leave,” “ask further about whether he actually thought about suicide,” “recommend use of a phone-counseling service or meeting with an expert for psychiatric counseling,” and “ask if he wants to walk the park more to talk.” The response to the first item was reverse-coded and all four scores were averaged (Cronbach's $\alpha = .69$).

Data analysis

Multiple methods were used to identify the RRS effect. First, analysis of variance (ANOVA) tests were conducted to determine differences in the two response measures (i.e., suicide prevention knowledge and behavioral intentions to help those with suicidal thoughts) among the participants. The main factor here is the intensity of the RRS as measured by the number of RRS elements, which include the five levels (no-news group, basic-RRS-news group, and the three types of additional RRS-news groups that were exposed to one, two, or three additional RRS elements in the news coverage). Although the four RRS news groups were considered as independent levels for the factor of RRS intensity, we conducted an additional ANOVA test to check whether there is a statistical difference when the RSS groups are aggregated to reduce the experimental groups to three (i.e., no-news group, basic-RRS-news group, and additional RRS-news groups).

Next, we conducted an analysis of covariance (ANCOVA) to test the effects of the exposure to suicide news reports while controlling for reflectiveness as a covariate. Reflectiveness as the control factor was measured only for those who read any version of the suicide news report. Therefore, the ANCOVA test included only the four groups and excluded the no-news group.

The interaction of reflectiveness and intensity of the RRS elements was also examined by conducting multivariate regression analyses to reveal how the two predictors interact and drive suicide-related responses. Here, the response measures (i.e., suicide prevention knowledge and behavioral intention to help those with suicidal thoughts) were regressed on the two predictors.

Results

The RRS effect without consideration of reflectiveness

The primary interest of the present study is to determine whether and how exposure to RRS is influential. An initial examination by ANOVA of the mean difference in the response measures among all participants, including the no-news group, showed no statistically significant difference in suicide prevention knowledge ($F [4, 303] = 2.28, p = .061$). Behavioral intention to help those with suicidal thoughts also did not significantly differ ($F [4, 303] = 1.61, p = .173$).

However, when the three different levels of RRS elements were aggregated into a single group, differences could be observed. Specifically, an interview story with any RRS element, regardless of the number of elements, was associated with more suicide prevention knowledge than that seen for the no-news group or the no-RRS group ($F [2, 305] = 4.51, p = .012, \text{partial } \eta^2 = .029$, see Table 1). A Bonferroni post hoc test revealed that individuals who read a suicide news report having any number of RRS elements ($M = 7.20, SD = 1.40$) showed a significantly higher level of suicide prevention knowledge than those who did not read a suicide news story ($M = 6.57, SD = 1.47, p = .008$). Meanwhile, behavioral

intention to help others with suicidal thoughts was not influenced by different news conditions, even after combining the three RRS conditions into one group ($F [2, 305] = 2.79, p = .063$).

The RRS effect considering reflectiveness

We also examined differences among participants who read any version of the news articles when the possible influence of reflectiveness was considered. As mentioned above, there was no main effect of suicide news on suicide prevention knowledge ($F [3, 243] = 0.38, p = .771$). However, an ANCOVA test, with RRS elements entered as the main factor and reflectiveness entered as a covariate, revealed that exposure to different numbers of RRS elements did lead to different levels of behavioral intention to help those with suicidal thoughts ($F [3, 243] = 2.798, p = .041, \text{partial } \eta^2 = .034$, Table 1). A Bonferroni post hoc test showed individuals who read the suicide news report with three RRS elements ($M = 5.11, SD = 0.83$) showed a significantly higher level of behavioral intention to help others in a suicidal crisis than those who read the basic news article that had no additional RRS elements ($M = 4.70, SD = 0.16, p = .033$).

Notably, the ANCOVA test showed that reflectiveness itself was associated with intensity of behavioral intention to help those with suicidal thoughts ($F [1, 245] = 14.141, p < .001, \text{partial } \eta^2 = .055$). To assess the joint effect of reflectiveness with RRS elements on news processing, we conducted a moderation analysis. When the intensity of RRS, reflectiveness, and the interaction of both factors were entered in a multiple regression model, only the interaction was significant ($b = .090, t[3, 243] = 2.106, p = .036$). Figure 1 visualizes how the association between reflectiveness and the behavioral intention to help those with suicidal thoughts varies with the number of RRS elements in news articles. Reflectiveness in conjunction with news containing a higher number of RRS elements had a stronger audience effect than did basic suicide news without much detailed information.

Table 1. Analysis of variance (ANOVA, ANCOVA) for suicide prevention knowledge and behavioral intentions among individual RRS elements and in aggregate.

Levels	DV: Suicide Prevention Knowledge							DV: Behavioral Intentions					
	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>F</i>	<i>p</i>	<i>partial</i> η^2	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	<i>partial</i> η^2	
IV: RRS elements													
No news	6.57	1.47	4,303	2.280	.061	.029	4.92	1.01	4,303	1.606	.173	.021	
No RRS	6.98	1.41					4.70	1.16					
Awareness	7.24	1.34					5.04	0.89					
Contact Info.	7.14	1.49					4.96	0.82					
Encourage	7.21	1.39					5.11	0.83					
<i>ANCOVA results controlled for reflectiveness</i>													
No RRS	6.98	1.41	3,243	0.375	.771	.005	4.70	1.16	3,243	2.798	.041	.034	
Awareness	7.24	1.34					5.04	0.89					
Contact Info.	7.14	1.49					4.96	0.82					
Encourage	7.21	1.39					5.11	0.83					
IV: Aggregate RRS elements													
No news	6.57	1.47	2,305	4.512	.012	.029	4.92	1.01	2,305	2.791	.063	.018	
No RRS	6.98	1.41					4.70	1.16					
Any RRS	7.20	1.40					5.03	0.85					
<i>ANCOVA results controlled for reflectiveness</i>													
No RRS	6.98	1.41	1,245	1.000	.318	.004	4.70	1.16	1,245	6.512	.011	.026	
Any RRS	7.20	1.40					5.03	0.85					

ANCOVA results controlled for reflectiveness and do not include the 'no news' condition, since reflectiveness was not assessed for this experimental condition.

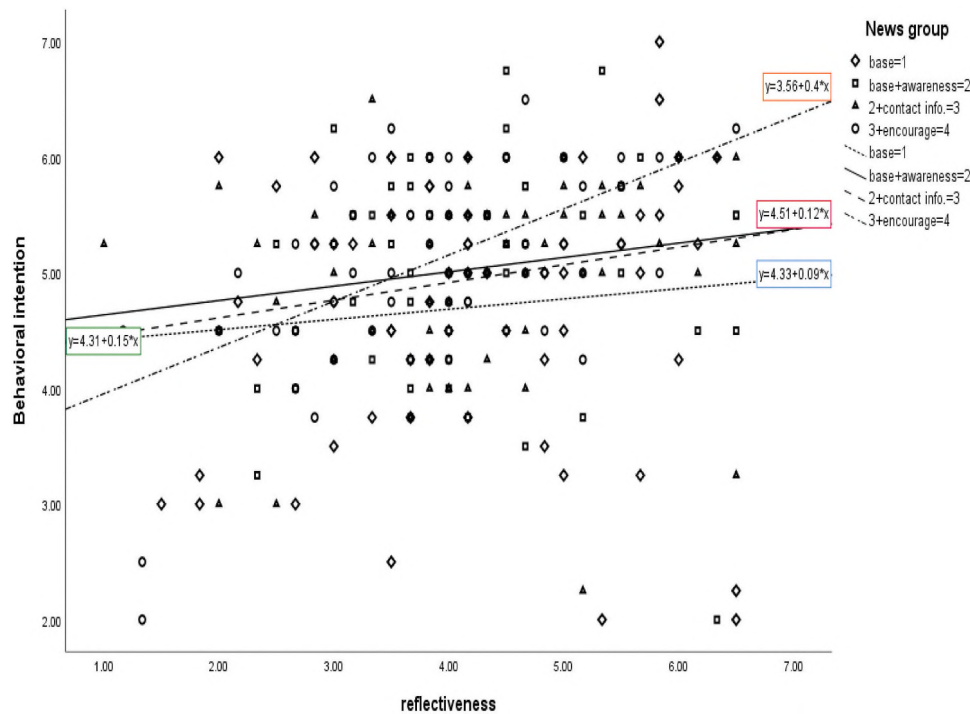


Figure 1. Moderation of the reflectiveness effect on behavioral intention by additional RRS.

Discussion

Here we sought to gain a deeper understanding of the effect of positive elements of responsible suicide reporting (RRS) by investigating differences in suicide prevention knowledge and behavioral intentions among study participants exposed to different degrees of RRS. Varying the number of RRS elements included in a suicide news story did not change suicide prevention knowledge among the groups, but the inclusion of any RRS element (in aggregate) did show an effect wherein those who read a news story with any number of RRS elements showed a higher level of suicide prevention knowledge than those who read no news at all. The RRS effect was also apparent for behavioral intentions such that exposure to a suicide news story having more RRS elements elicited a higher level of behavioral intention to help in a suicidal crisis than those who were exposed only to a basic version of a suicide news report that had no additional RRS elements. When controlling for reflectiveness, more RRS elements increased audience behavioral intention to help others in a suicidal crisis. Taken together, RRS elements in a suicide news story appear to have a positive impact on suicide knowledge among audience members. The inclusion of such elements can also foster (positive) behavioral intentions to help others in a suicidal crisis when a news article sparks reflectiveness among its audience.

These findings have some notable implications for suicide prevention. In a broad sense, the results complement those of studies on the effects of actual, negative suicide news (Fu & Yip, 2009; Lee et al., 2014; Mann et al., 2005; Niederkrotenthaler et al., 2020; Pirkis & Blood, 2001; Schäfer & Quiring, 2015; Stack, 2009, 2020), and adds to the much smaller group of studies that focused on the effects of positive suicide news

(Niederkrotenthaler & Till, 2020; Niederkrotenthaler et al., 2010). Previous studies also reported how audiences with suicidal thoughts were affected by positive suicide news stories featuring individuals who were positively coping with suicidal ideation (Niederkrotenthaler & Till, 2020). In this study, we report similarly positive effects of RRS elements on suicide prevention knowledge and behavioral intention for individuals selected from the general public in a non-Western country.

Several other studies also went beyond investigating only the negative Werther effect of news media by conducting content analyses that focused more on the structure and elements of suicide news coverage (Armstrong et al., 2018; Creed & Whitley, 2017; Easson et al., 2014; Fu et al., 2011; Tatum et al., 2010). There have also been studies on the effect of guidelines for suicide reporting. These studies compared the quality of suicide reporting before and after the release of guidelines (Pirkis et al., 2009), and how suicide reporting that follows reporting guidelines is shared on social media (Sumner et al., 2020). Some studies found no effect of violating suicide reporting guidelines (Anestis et al., 2015; Williams & Witte, 2018).

In addition to expanding the body of studies that examined how positive suicide news affect audiences (Niederkrotenthaler & Till, 2020; Niederkrotenthaler et al., 2010), the current study shows that non-clinical members of the general population can benefit from suicide news stories that include RRS elements, depending on their level of individual reflectiveness during the media exposure. In particular, the present study contributes to empirical knowledge based on an experimental study design that RRS may produce more benefits when positive elements are added compared to when no additional element is added. We also made a more in-depth

examination of how RRS works in the public mind by investigating the influence of reflectiveness in terms of its interaction with RRS. Our experimental approach to the main and interaction effect of RRS involves testing the effects of journalistic elements in news writing, and thus further research would provide a basis on which journalistic use and discourse of responsible reporting on suicide would be stimulated.

Investigating reflectiveness by itself and as a relatively new feature is an especially notable result of this study. We found an interaction of RRS with reflectiveness in terms of stronger behavioral intentions to help others in a suicidal crisis. Based on the substantial influences of this relatively new construct identified in the present study, future research can further examine not only factors associated with the intensity of reflectiveness, but also other behavioral intentions that are affected by the interaction of RRS and reflectiveness. Extending this line of research can enrich suicide prevention studies both practically and theoretically.

Limitations

This study also has some limitations. First, we excluded individuals who had high hopelessness scores, although positive effects were expected and helpful interventions were tested. Excluding vulnerable individuals is a common approach to conducting studies involving human subjects and is oftentimes suggested by the IRB board. However, selective data collection may not be consistent with the intent-to-treat principle that seeks to maintain prognostic balance generated from the original random treatment allocation (Gupta, 2011). Moreover, future investigations of the positive effects of responsible reporting on suicide could benefit from also including vulnerable subjects.

Geographically, the suicide rates in South Korea have been the highest or second-highest in the world for a decade, and the nation is relatively well aware of the issue. This awareness may complicate detection of the effect of RRS elements in news stories. We found a general RRS effect on suicide prevention knowledge compared to the no-news group, but an increase in the number of RRS elements was not connected to differences between groups that read news articles containing different number of RRS elements. Given that Papageno effects can be relatively small and therefore hard to detect, it would be worthwhile to examine if a similar finding occurs in another society in which suicide issues are not as frequently addressed as in South Korea.

We did not conduct a manipulation check, considering that each condition of the experiment represents an additional RRS element rather than a uniquely different concept of responsible suicide reporting. However, the stimuli were texts having only small differences, and participants for each condition might not have noticed the difference. Future studies could have a more in-depth exploration of the role of audience attentiveness.

Regarding the primary outcomes and measures of this study, we focus on suicide prevention knowledge with the consideration that it is an important coping resource (Ramberg et al., 2016). Willingness to help others in a suicidal crisis was examined since this feature is of particular

societal relevance to prevent suicides. We tried to examine the effects of exposure to suicide news both for people in and out of a suicidal crisis. However, more direct outcomes such as suicide ideation and help-seeking intentions, are also likely to reveal insightful results.

The response measures were collected just after the exposure to the stimulus news story. Attitudinal and intentional measures for suicide prevention might have been used before and after exposure to the stimulus so that we could identify changes before and after exposure. This adjustment is potentially important considering that attitudes and intentions toward a certain issue might have already been established in an individual's mind and thus a better way to identify news effects would be to examine changes before and after the exposure. Last, in the current study, the control group did not receive a news article. Future studies could present a non-suicide-related news article as has been done for other studies on this topic.

Conclusion

Using evidence from South Korea, a country that historically has had one of the highest suicide rates in the world, this study shows that elements indicative of Responsible Reporting on Suicide (RRS) can have positive effects both on suicide-related knowledge and intentions to help others. In aggregate, educational suicide news stories having more RRS elements increased suicide prevention knowledge, and these news elements even increased individual intentions to help others with suicidal thoughts when individuals showed a higher reflectiveness about the story. Including more RRS elements in suicide news may help individuals to reflect more about suicide, which would arguably have positive effects on knowledge and future intentions to help, and would be beneficial for future suicide prevention efforts.

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ORCID

Sebastian Scherr  <http://orcid.org/0000-0003-4730-1575>
Michael Prieler  <http://orcid.org/0000-0002-7851-8016>

Ethics statement

All study methods were approved by the Institutional Review Board (IRB) at Hallym University.

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