

# Associations of Tabloid Newspaper Use With Endorsement of Suicide Myths, Suicide-Related Knowledge, and Stigmatizing Attitudes Toward Suicidal Individuals

Benedikt Till<sup>1,2</sup>, Teresa A. Wild<sup>1</sup>, Florian Arendt<sup>2</sup>, Sebastian Scherr<sup>3</sup>, and Thomas Niederkrotenthaler<sup>1</sup>

<sup>1</sup>Unit Suicide Research & Mental Health Promotion, Department of Social and Preventive Medicine, Center for Public Health, Medical University of Vienna, Austria

<sup>2</sup>Department of Communication Science and Media Research, University of Munich (LMU), Germany

<sup>3</sup>School for Mass Communication Research, University of Leuven, Belgium

**Abstract.** *Background:* Educating the public about suicide is an important component of suicide prevention. So far, little is known about whether common misconceptions of suicide are related to individual tabloid newspaper use. *Aims:* This study aimed to investigate associations of time spent reading tabloids with endorsement of suicide myths, suicide-related knowledge, and with stigmatizing attitudes toward suicidal individuals. *Method:* In this cross-sectional online survey, we assessed suicide-related knowledge and stigmatizing attitudes toward suicidal individuals among 456 study participants in Austria together with their endorsement of five common suicide myths (e.g., “suicidal individuals do not communicate their intent”). Furthermore, we assessed participants’ time spent reading tabloids. *Results:* Multivariate analyses controlling for gender, age, education, and the time spent reading broadsheet newspapers and watching television indicated that participants’ time spent reading tabloids was associated with higher endorsement of suicide myths as well as with a lower level of suicide-related knowledge and a higher level of stigmatizing attitudes toward suicidal individuals. *Limitations:* Due to the study’s cross-sectional design, causality concerning these associations could not be assessed. *Conclusion:* The present findings confirm that readers of tabloids are an important target group for suicide education efforts.

Accurate education of the public about suicide and suicide prevention is essential for preventing suicide (Grandin, Yan, Gray, Jamison, & Sachs, 2001; Niederkrotenthaler, Reidenberg, Till, & Gould, 2014; Voracek, Tran, & Sonneck, 2008; World Health Organization [WHO], 2014, 2017b). An important goal of educative efforts is to increase suicide-related knowledge in the general population (Dumesnil & Verger, 2009). Furthermore, education also seeks to reduce stigmatizing attitudes toward suicidal individuals (Calear, Batterham, & Christensen, 2014; Mann et al., 2005; Niederkrotenthaler et al., 2014). Stigmatizing attitudes toward suicidal individuals are particularly problematic for suicide prevention, because they tend to (a) reduce the suicidal individual’s willingness to seek professional help in order to overcome a suicidal cri-

sis, and (b) counteract mental health literacy in the general population (Calear et al., 2014; Niederkrotenthaler et al., 2014).

A further specific issue in the area of suicide-related education efforts is the debunking of common public suicide myths. Suicide myths are popular misconceptions about suicide and suicidality as expressed by public attitudes based on false or partially incorrect facts (Domino, 1990). Suicide myths comprise a wide scope of misconceptions including, for example, labeling suicidal individuals as selfish or vengeful, which distort the public perception of suicidal behaviors (Joiner, 2010, 2011). They also include more complex ideas or explanatory heuristics about suicides such as “suicidal individuals do not communicate their intent” or “suicidal individuals do not want any help”

(Domino, 1990; Neuringer, 1988; Niederkrotenthaler et al., 2010; Samaritans, 2008; Schurtz, Cerel, & Rodgers, 2010; Sonneck, Kapusta, Tomandl, & Voracek, 2016). Many of these myths hamper education efforts for suicide prevention (Katz-Sheiban & Eshet, 2008). Specifically, they might inhibit help-seeking behaviors, increase stigmatization of suicidal individuals, and ultimately lower the odds of mental health experts and families to accurately assess suicide risk (Joiner, 2010, 2011; Schurtz et al., 2010).

The media are a powerful resource in educating and informing the public about mental health issues, including suicide (Beautrais, Horwood, & Fergusson, 2004; Scherr, 2016). Tabloid newspapers may be particularly relevant for suicide-related education. Tabloids are defined as newspapers created for a mass market that tend to focus more on soft news than on hard news (i.e., personal narratives about individuals, predominance of visual images and sensational reporting over systematic analysis and rational description, use of dramatic storytelling techniques; see Bird, 2000; Reinemann, Stanyer, Scherr, Legnante, 2012). By contrast, broadsheet newspapers – their counterparts – are generally considered to be more serious and less sensationalist (Johansson, 2007). Tabloid newspapers generally tend to have high circulation in newspaper markets in most European countries (Johansson, 2007) and higher shares of individuals with lower levels of income, lower educational attainment, and lower social status among their readership than broadsheet newspapers (Williams, 2010). Importantly, these sociodemographic groups are at comparatively higher risk for suicide (Rehkopf & Buka, 2006). Tabloid newspapers in German-speaking countries are particularly known for their negativity (Engesser et al., 2014) and sensationalist portrayal of death (Hanusch, 2013), and they tend more than other media not to follow media guidelines on suicide reporting (Schütte, 2008). Thus, news articles in tabloids may contain more common misconceptions about suicide than broadsheet newspapers and may contribute more strongly to the endorsement of inaccuracies and suicide myths in society. A study in Austria has shown that newspaper reports that spread suicide myths such as “individuals who talk about suicide won’t do it” or “suicidal individuals do not communicate their intent” were associated with subsequent increases in suicides in the area where a large proportion of the population was exposed to the message (Niederkrotenthaler et al., 2010).

In spite of their potentially relevant role in the maintenance and spreading of suicide-related knowledge, but also of suicide myths and stigma, there is little research available that has actually tested whether these education

domains vary with time spent reading tabloids. The present study aimed to investigate how the accuracy in perception of suicidality is associated with tabloid newspaper use. We hypothesized that the more time spent by individuals reading tabloids, the greater their endorsement of suicide myths, the lower their suicide-related knowledge, and the greater their level of stigmatizing attitudes toward suicidal individuals.

## Method

### Participants

We conducted a German-language online survey between February 20 and April 6, 2016. We recruited 671 participants with announcements of the study posted in social media outlets and with posters at various public venues (e.g., community centers).

### Ethics Statement

Ethical approval for this study was obtained from the ethics review board of the Medical University of Vienna and the Vienna General Hospital AKH (study protocol 1969/2015).

### Measures

#### Time Spent Reading Tabloid and Broadsheet Newspapers

We provided a list of the nine largest Austrian nationwide newspapers and asked participants to indicate for each newspaper on how many days per week they read an issue of the respective newspaper on an 8-point scale ranging from 0 to 7. This scale has been used in previous studies investigating the role of mass media in suicidal behavior (Arendt, Till, & Niederkrotenthaler, 2016; Niederkrotenthaler, Arendt, & Till, 2015). In addition, based on the authors’ assessment of the newspapers and in line with our definition of tabloid and broadsheet newspapers, we divided the nine listed newspapers into tabloids ( $n = 4$ ; *Kronen Zeitung*, *Österreich*, *Heute*, *Kleine Zeitung*<sup>1</sup>) and broadsheets ( $n = 5$ ; *Kurier*, *Die Presse*, *Der Standard*, *Salzburger Nachrichten*, *Vorarlberger Nachrichten*). We then calculated a mean score across all four tabloids to estimate partici-

1 *Kleine Zeitung* is not commonly considered a tabloid newspaper in Austria. The portrayal of suicide featured in this newspaper, however, has clear similarities to the other three newspapers categorized as tabloid newspapers in the present study.

pants' time spent reading tabloids (score range: 0–7), and we calculated a mean score across all five broadsheets to estimate participants' time spent reading broadsheets (score range: 0–7).

### Endorsement of Suicide Myths

We compiled a collection of five common misconceptions about suicide adopted from previous studies on suicide myths (e.g., Domino, 1990; Neuringer, 1988; Niederkrotenthaler et al., 2010; Seibokaite & Genutyte, 2015; Schurtz et al., 2010; Sonneck et al., 2016). For each of the five myths about suicide, we created one item: (a) Suicidal individuals do not communicate their intent; (b) a person who threatens with suicide just wants to get attention; (c) individuals facing death will not die by suicide; (d) suicidal individuals do not want any help; and (e) only those who seriously attempted suicide will continue to be suicidal after the attempt. We asked the participants to indicate whether the respective statement was true (= 1) or false (= 0). The correct answer for all statements was *false*. All items on this scale were analyzed individually.

### Suicide-Related Knowledge

The Revised Facts on Suicide Quiz (Voracek et al., 2008) is a self-report measure with a total of 34 items. For 19 items (e.g., “A person who has made a past suicide attempt is more likely to attempt suicide again than someone who has never attempted”) the answers were *true*, *false*, or *don't know*, while for 15 items a multiple-choice response format with three response alternatives was adopted (i.e., “The risk of death by suicide for a person who has attempted suicide in the past is lower than/similar to/higher than that for someone who has never attempted”). Respondents received one point for each correct answer and the ratio of correct to incorrect answers across all 34 items was then calculated for each participant. Hence, a score of 0 is indicative of solely wrong answers, whereas a score of 1 indicates solely correct answers to the 34 questions.

### Stigmatizing Attitudes Toward Suicidal Individuals

The Stigma Subscale of the Short Stigma of Suicide Scale (Batterham, Calear, & Christensen, 2012) consists of eight adjectives such as *cowardly* or *shallow* on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For each participant, mean scores across all items of this scale were calculated (score range: 1–5). Higher scores represent higher stigmatizing attitudes toward suicidal individuals.

### Time Spent Watching Television

We asked participants to report the average number of hours they spend on watching television per day in a typical week (including weekend) using an open-ended question. Similar items have been used in previous studies (Till,

Truong, Mar, & Niederkrotenthaler, 2016; Truong, 2011) to measure the average amount of television use.

## Data Analysis

Five hierarchical binary logistic regression analyses using the entry method were employed to predict endorsement of suicide myths by the time spent reading tabloids. Consistent with previous studies (e.g., Till et al., 2016), the answers to the five individual questions on endorsement of suicide myths were used as dependent variables. Furthermore, in two hierarchical multiple regression analyses using the entry method, we predicted suicide-related knowledge and stigmatizing attitudes toward suicidal individuals through the time spent reading tabloids. All of the analyses were controlled for participants' gender, age, education, as well as the time spent reading broadsheets and watching television.

## Results

### Demographic Characteristics of the Sample

A total of 456 participants currently living in Austria, including 351 females (77%) and 105 males (23%), with a mean age of 29.5 years ( $SD = 12.5$ ), completed the entire survey and were included in the study. In terms of highest completed education, 1.8% ( $n = 8$ ) of the participants had compulsory education (i.e., legally required minimum education in Austria), 4.4% ( $n = 20$ ) completed apprenticeship training, 6.1% ( $n = 28$ ) completed intermediate technical and vocational school, 61.0% ( $n = 278$ ) were secondary/high school graduates, and 26.8% ( $n = 122$ ) completed college or university. Hence, in our sample, females, young individuals, and individuals with an education level above high school graduation were overrepresented compared with the general population (Statistik Austria, 2011). Zero-order correlations between suicide-related knowledge, stigmatizing attitudes toward suicidal individuals, the time spent reading tabloids, and all covariates are made available as a supplementary file (see table in Electronic Supplementary Material 1).

### Endorsement of Suicide Myths

In total, 50% of the participants ( $n = 228$ ) incorrectly answered at least one of the five questions related to endorse-

ment of suicide myths. Particularly the myth that suicidal individuals do not communicate their intent was commonly endorsed by participants, with 32.2% of the respondents ( $n = 147$ ) endorsing this myth. All of the descriptive statistics of endorsement of suicide myths as well as the time spent reading tabloids stratified for endorsement of suicide myths are depicted in Table 1.

As shown in Table 2, binary logistic regression analyses revealed that the time spent reading tabloids predicted all items on endorsement of suicide myths. The higher the participants' time spent reading tabloids, the higher the probability of endorsing one or more of the following five suicide myths: (a) Suicidal individuals do not communicate their intent; (b) a person who threatens with suicide just wants to get attention; (c) individuals facing death will not die by suicide; (d) suicidal individuals do not want any help; and (e) only those who seriously attempted suicide will continue to be suicidal after the attempt. All associations were found to be robust, independent of individual differences in gender, age, education, and the time spent reading broadsheets and watching television, which were controlled for in the analyses. Regarding covariates, lower education (i.e., low levels in terms of highest completed education) and older age consistently predicted the endorsement of suicide myths as well.

## Suicide-Related Knowledge and Stigmatizing Attitudes Toward Suicidal Individuals

The descriptive statistics for suicide-related knowledge, stigmatizing attitudes toward suicidal individuals, and the time spent reading tabloids are depicted in Table 3. Mul-

tivariate linear regression analyses revealed that the time spent reading tabloids predicted lower suicide-related knowledge and stronger stigmatizing attitudes toward suicidal individuals (see Table 4). Of note, lower levels in terms of highest completed education were predictive of lower suicide-related knowledge and stronger stigmatizing attitudes toward suicidal individuals. Furthermore, older age was associated with lower suicide-related knowledge.

## Discussion

This study shows that the time spent reading tabloids raises the odds of endorsing suicide myths, and is associated with low suicide-related knowledge and high levels of stigmatizing attitudes toward suicidal individuals. These findings even hold true when controlling for gender, age, education, and the time spent reading broadsheets and watching television. The use of tabloid newspapers for daily information appears to be an independent factor in the endorsement of misconceptions about suicide. These findings are consistent with earlier findings that tabloid newspapers in German-speaking countries are particularly known for their negativity (Engesser et al., 2014) and sensationalist portrayal of death (Hanusch, 2013). Further, they tend more than other media not to follow media guidelines on suicide reporting (Schütte, 2008).

A possible explanation of these findings is provided by cultivation theory (Gerbner et al., 2002; Morgan & Shanahan, 2010). This theory suggests that people's beliefs and assumptions about the world are adapted over time by constantly recurring images portrayed in the mass media. For example, previous studies have shown that heavy television viewing or preference for certain television genres

**Table 1.** Descriptive statistics of endorsement of suicide myths and the time spent reading tabloids stratified for endorsement of suicide myths

Suicide myth	Endorsement of suicide myth	<i>N</i>	%	Time spent reading tabloids <i>M</i> ( <i>SD</i> ) (score range: 0–7)
No communication of intent	No	309	67.8	0.42 (0.67)
	Yes	147	32.2	0.68 (0.82)
Just wants to get attention	No	351	77.0	0.44 (0.67)
	Yes	105	23.0	0.73 (0.88)
Individuals facing death will not die by suicide	No	419	91.9	0.47 (0.70)
	Yes	37	8.1	0.93 (0.89)
Suicidal individuals do not want any help	No	407	89.3	0.46 (0.69)
	Yes	49	10.7	0.91 (0.94)
Only serious suicide attempters are suicidal	No	385	84.4	0.45 (0.69)
	Yes	71	15.6	0.82 (0.85)

*Note.* Values are absolute (*N*) and relative (%) frequencies of participants answering the five items on endorsement of suicide myths correctly or incorrectly as well as their means and standard deviations (*SD* in parentheses) in terms of the time spent reading tabloids.

**Table 2.** Results of hierarchical binary logistic regression analyses to predict endorsement of suicide myths

	No communication of intent			Just want to get attention			Individuals facing death will not die by suicide			Suicidal individuals do not want any help			Only serious suicide attempters are suicidal		
	OR (CI)	R <sup>2</sup>	χ <sup>2</sup>	OR (CI)	R <sup>2</sup>	χ <sup>2</sup>	OR (CI)	R <sup>2</sup>	χ <sup>2</sup>	OR (CI)	R <sup>2</sup>	χ <sup>2</sup>	OR (CI)	R <sup>2</sup>	χ <sup>2</sup>
Step 1		.08	26.13 <sup>***b</sup>		.05	13.95 <sup>b</sup>		.15	29.37 <sup>b</sup>		.11	26.53 <sup>***b</sup>		.14	39.40 <sup>***b</sup>
Gender <sup>a</sup>	0.87 (0.70–1.07)			0.93 (0.74–1.17)			1.17 (0.85–1.62)			1.01 (0.75–1.36)			0.89 (0.67–1.17)		
Age	1.08 (0.88–1.33)			1.18 (0.95–1.46)			1.39* (1.04–1.86)			1.37* (1.05–1.78)			1.44** (1.14–1.82)		
Education	0.63 <sup>***</sup> (0.51–0.79)			0.77* (0.62–0.96)			0.59 <sup>***</sup> (0.44–0.78)			0.63** (0.48–0.82)			0.60 <sup>***</sup> (0.47–0.76)		
Time spent reading broadsheets	0.98 (0.80–1.21)			0.92 (0.73–1.16)			0.94 (0.65–1.35)			0.97 (0.71–1.33)			0.96 (0.73–1.26)		
Time spent watching television	0.84 (0.67–1.06)			0.96 (0.75–1.21)			0.95 (0.64–1.41)			0.85 (0.59–1.24)			1.03 (0.79–1.35)		
Step 2		.10	33.26 <sup>***c</sup>		.07	21.96 <sup>**c</sup>		.17	33.99 <sup>***c</sup>		.14	33.69 <sup>***c</sup>		.16	44.68 <sup>***c</sup>
Time spent reading tabloids	1.32** (1.08–1.62)			1.36** (1.10–1.69)			1.40* (1.04–1.88)			1.45** (1.02–1.76)			1.34* (1.05–1.70)		
Change from Step 1 to Step 2		.02	7.12 <sup>**</sup>		.02	8.01 <sup>**</sup>		.02	4.62*		.03	7.16 <sup>**</sup>		.02	5.28*
ΔR <sup>2</sup> , χ <sup>2d</sup>															

Note. Values are odds ratios (OR) and 95% confidence intervals (CI). Also reported are Nagelkerke's R<sup>2</sup> and χ<sup>2</sup> values for each step of the model as well as changes in R<sup>2</sup> values (ΔR<sup>2</sup>) from Step 1 to Step 2 along with χ<sup>2</sup> values of significance tests.

\* p < .05. \*\* p < .01. \*\*\* p < .001 (two-tailed).

<sup>a</sup>Reference group: Female.

<sup>b</sup>df = 5.

<sup>c</sup>df = 6.

<sup>d</sup>df = 1.

**Table 3.** Descriptive statistics for suicide-related knowledge, stigmatizing attitudes toward suicidal individuals, time spent reading tabloids, time spent reading broadsheets, and time spent watching television among study participants

Study variables	$\alpha$	<i>M</i>	<i>SD</i>	Min.	Max.	Range
Suicide-related knowledge	.62	0.50	0.12	0.09	0.79	0–1
Stigmatizing attitudes toward suicidal individuals	.87	1.81	0.69	1.00	4.25	1–5
Time spent reading tabloids	–	0.51	0.73	0.00	3.50	0–7
Time spent reading broadsheets	–	0.70	0.76	0.00	3.80	0–7
Time spent watching television	–	2.81	2.78	0.00	15.00	0–24

Note. Values are means (*M*), standard deviations (*SD*), lower-bound (Cronbach's  $\alpha$ ) sample reliabilities, and score ranges (range) as well as lowest (min.) and highest (max.) value of the variables.

**Table 4.** Results of hierarchical multiple linear regression analyses to predict suicide-related knowledge and stigmatizing attitudes toward suicidal individuals

	Suicide-related knowledge				Stigmatizing attitudes toward suicidal individuals			
	$\beta$	<i>SE</i>	$R^2$	<i>F</i>	$\beta$	<i>SE</i>	$R^2$	<i>F</i>
Step 1			.104	11.57*** <sup>b</sup>			.005	1.50 <sup>b</sup>
Gender <sup>a</sup>	.02	.04			-.03	.05		
Age	-.20***	.05			-.05	.05		
Education	.18***	.05			-.10*	.05		
Time spent reading broadsheets	.08	.05			.04	.05		
Time spent watching television	-.02	.04			.03	.05		
Covariates as a block								
Step 2			.137	13.01*** <sup>c</sup>			.014	2.10 <sup>c</sup>
Time spent reading tabloids	-.19***	.05			.11*	.05		
Change from Step 1 to Step 2								
$\Delta R^2, \Delta F$			.034	18.01*** <sup>d</sup>			.011	5.03* <sup>d</sup>

Note. Values are standardized regression coefficients ( $\beta$ ) and standard errors of the beta coefficients (*SE*). Due to standardization, regression coefficients *b* and  $\beta$  are identical. Also reported are adjusted  $R^2$  and *F* values for each step of the model along with changes in  $R^2$  and *F* values ( $\Delta R^2, \Delta F$ ) from Step 1 to Step 2.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$  (two-tailed).

<sup>a</sup>Reference group: Female.

<sup>b</sup> $df_1 = 5, df_2 = 449$ .

<sup>c</sup> $df_1 = 6, df_2 = 448$ .

<sup>d</sup> $df_1 = 1, df_2 = 448$ .

create a bias that not only affects frequency estimates of real-world events (Shrum & O'Guinn, 1993), but can also influence core societal norms and generate myths and misconceptions (Till et al., 2016; Truong, 2011). Similar cultivation effects have also been shown for tabloid newspapers (Arendt, 2012; McKay-Semmler, Semmler, & Kim, 2014). The association of the endorsement of suicide myths with the time spent reading tabloids observed in the present study may thus be based on sensationalism and low accuracy in the portrayal of suicide and other health-related topics typically found in tabloid newspapers aimed at a mass market (Hanusch, 2013; Schütte, 2008). Previous studies have shown that newspaper reports on suicide in Austria tend not to portray suicide in accordance with epidemiological realities of suicide (Niederkrotenthaler et al.,

2009), which may be particularly true for tabloid newspapers (Schütte, 2008).

There has been debate among scholars about whether or not health-related myths should be debunked by explicitly addressing them with myth-busting reports (Cameron et al., 2013; Schurtz et al., 2010). The problem involved with debunking myths is that this endeavor involves, to some extent, the repetition of the myth in order to debunk it, which might result in unintended backfire effects, when people remember the wrong instead of the correct facts. Indeed, research has shown that the public recalls myths more than facts, including myths about suicide, calling into question the common practice used in many public information campaigns (Begg, Anas, & Farinacci, 1992; Schwarz, Sanna, Skurnik, & Yoon, 2007; Skurnik, Yoon,

Park, & Schwarz, 2005; Stout, Rodgers, & Guard, 2008). One viable option for suicide prevention could be inspired by the recently published “Let’s Talk” campaign to reduce the stigma associated with depression (see WHO, 2017a). Importantly, given our finding that participants endorsed the myth that suicidal individuals do not communicate their intent, a campaign addressing this myth would be worth considering for suicide prevention. On the basis of our findings, one could conclude that a campaign similar to “Let’s Talk” to reduce the stigmatization of depression could help prevent suicides especially if the campaign plan focuses on tabloid newspapers as a main media delivery source for the campaign.

Generally, participants of the present study were relatively knowledgeable about suicide myths as indicated by the finding that 50% of the study sample answered all items on endorsement of suicide myths correctly. This is consistent with previous studies suggesting that misconceptions about suicide are not endorsed as frequently as sometimes suggested by concerned suicide experts (Domino, 1990; Katz-Sheiban & Eshet, 2008; Schurtz et al., 2010). Domino (1990) investigated the prevalence of 20 common misconceptions of suicide in a representative sample of 643 adults in the United States and found that the median percentage of endorsement of the suicide myths was 25%, and for only four myths were the percentages of endorsement greater than 50%.

Participants of the present study also had fewer stigmatizing attitudes toward suicidal individuals than did participants of previous studies (see Batterham et al., 2013), and suicide-related knowledge was comparable to the level of knowledge in medical and psychology undergraduate students (see Voracek et al., 2008). The relatively high level of suicide literacy found in the present study could be attributed to the large number of high school and college graduates in the sample. However, since these demographics basically mirror the readership of today’s newspapers well, our findings are of even greater relevance.

## Implications

Our findings suggest that use of tabloid newspapers is linked to the endorsement of common suicide myths, stigmatizing attitudes toward suicidal individuals, and low suicide-related knowledge. Therefore, campaigns especially in tabloid newspapers as well as close collaborations between suicide experts and tabloid newspapers would be particularly relevant for suicide prevention. Awareness campaigns and responsible suicide reporting in tabloids would indeed reach an audience with lower suicide literacy, and campaigns in these outlets would have a great potential to debunk common misconceptions and

stereotypes about suicide. In fact, it has been shown that newspaper reports explicitly debunking widely shared suicide myths can increase knowledge about suicide, which in turn positively influences intentions to provide help to suicidal individuals (Arendt, Scherr, Niederkrotenthaler, Krallmann, & Till, 2017).

## Limitations

The present study has some limitations. First, a cross-sectional survey was used to assess associations of the time spent reading tabloids with endorsement of suicide myths, suicide-related knowledge, and stigmatizing attitudes toward suicidal individuals. Based on this design, the causality of these associations cannot be assessed. Longitudinal studies may help to get further insight into the cultivating effects of tabloid newspaper use on the public perception of suicidality. Second, the classification of a statement on suicide as suicide myth may sometimes be more a matter of perspective than of fact. For example, the belief that “suicidal individuals do not communicate their intent” is considered a myth, although suicidal intent is not clearly communicated in all cases of suicidal ideation or even suicide. Furthermore, our sample was not representative of the general population in Austria. While the participants’ time spent watching television corresponded to the average television viewing time in Austria, (i.e., 2 hr per day), females, young individuals, and individuals with an education level above high school graduation were overrepresented (Statistik Austria, 2011, 2013). The sample contained a high proportion of university students. However, these demographics mirror the typical newspaper readership relatively accurately, and therefore our participants also spent considerably more time reading newspapers compared with the general population in Austria (Statistik Austria, 2013). Another limitation of the study may be the fact that the participants’ use of the Internet and social media was not assessed. Online media use might influence the identified associations. Importantly, the findings of the present study cannot be generalized to different cultures because of cultural differences in media use patterns (see Mooij, 2014; Nielsen, 2014; Vereecken, Todd, Roberts, Mulvihill, & Maes, 2005). The media landscape in Austria is considered to be similar to other countries in Central Europe, such as Germany and Switzerland (Hasebrink, 2017), but different from other world regions. Studies aiming to replicate the present findings in other world regions are therefore warranted. Finally, the reliability of the scale measuring suicide-related knowledge was relatively low, which is a known psychometric limitation of the administered instrument and may derive from the het-

erogeneity of items in terms of content and scope (Voracek et al., 2008).

## Conclusion

Our study shows that the time spent reading tabloids is a significant predictor of low levels of suicide education (i.e., endorsement of common suicide myths, stigmatizing attitudes toward suicidal individuals, and low suicide-related knowledge). Reliance on tabloids as the main source of information may be problematic in developing or strengthening misconceptions about suicide, but collaboration with tabloids in media campaigns offers the chance to reach an important target population that might benefit from accurate portrayals of suicide and suicide prevention.

## Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at <https://doi.org/10.1027/0227-5910/a000516>

### ESM 1. Table

Pearson correlations between suicide-related knowledge, stigmatizing attitudes toward suicidal individuals, the time spent reading tabloids, and all covariates

## References

- Arendt, F. (2012). A newspaper's effect on the strength of automatic associations in memory. *Journal of Media Psychology, 24*, 1–8. <https://doi.org/10.1027/1864-1105/a000057>
- Arendt, F., Scherr, S., Niederkrotenthaler, T., Krallmann, S., & Till, B. (2017). Effects of awareness material on suicide-related knowledge and the intention to provide adequate help to suicidal individuals. *Crisis*. Advance online publication. <https://doi.org/10.1027/0227-5910/a000474>
- Arendt, F., Till, B., & Niederkrotenthaler, T. (2016). Effects of suicide awareness material on implicit suicide cognition: A laboratory experiment. *Health Communication, 31*, 718–726. <https://doi.org/10.1080/10410236.2014.993495>
- Batterham, P., Cleave, A., & Christensen, H. (2013). The Stigma of Suicide Scale: Psychometric properties and correlates of the stigma of suicide. *Crisis, 34*(1), 13–21. <https://doi.org/10.1027/0227-5910/a000156>
- Beautrais, A. L., Horwood, L. J., & Fergusson, D. M. (2004). Knowledge and attitudes about suicide in 25-year-olds. *Australian and New Zealand Journal of Psychiatry, 38*, 260–265. <https://doi.org/10.1080/j.1440-1614.2004.01334.x>
- Begg, I. M., Anas, A., & Fairnacci, S. (1992). Dissociation of processes in belief: Source recollection, statement familiarity, and the illusion of truth. *Journal of Experimental Psychology: General, 121*, 446–458. <https://doi.org/10.1037/0096-3445.121.4.446>
- Bird, S. E. (2000). Audience demands in a murderous market: Tabloidization in U.S. television news. In C. Sparks & J. Tulloch (Eds.) *Tabloid tales: Global debates over media standards* (pp. 213–228). Oxford, UK: Roman & Littlefield.
- Cleave, A. L., Batterham, P. J., & Christensen, H. (2014). Predictors of help-seeking for suicidal ideation in the community: Risks and opportunities for public suicide prevention campaigns. *Psychiatry Research, 219*, 525–530. <https://doi.org/10.1016/j.psychres.2014.06.027>
- Cameron, K. A., Roloff, M. E., Friesema, E. M., Brown, T., Jovanovic, B. D., Hauber, S., & Baker, D. W. (2013). Patient knowledge and recall of health information following exposure to “facts and myths” message format variations. *Patient Education and Counseling, 92*, 381–387. <https://doi.org/10.1016/j.pec.2013.06.017>
- Domino, G. (1990). Popular misconceptions about suicide: How popular are they? *Omega: Journal of Death and Dying, 21*, 167–175. <https://doi.org/10.2190/C1D7-AV2P-T5LU-J91V>
- Dumesnil, H., & Verger, P. (2009). Public awareness campaigns about depression and suicide: A review. *Psychiatric Services, 60*, 1203–1213. <https://doi.org/10.1176/ps.2009.60.9.1203>
- Engesser, S., Esser, F., Reinemann, C., Scherr, S., Matthes, J., & Wonneberger, A. (2014). Negativität in der Politikberichterstattung: Deutschland, Österreich und die Schweiz im Vergleich [Negativity in coverage of politics: A comparison of Germany, Austria, and Switzerland]. *Medien & Kommunikationswissenschaft, 62*, 588–605. <https://doi.org/10.5771/1615-634x-2014-4-588>
- Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 43–68). Hillsdale, NJ: Lawrence Erlbaum.
- Grandin, L. D., Yan, L. J., Gray, S. M., Jamison, K. R., & Sachs, G. S. (2001). Suicide prevention: Increasing education and awareness. *Journal of Clinical Psychiatry, 62*, 12–16.
- Hanusch, F. (2013). Sensationalizing death? Graphic disaster images in the tabloid and broadsheet press. *European Journal of Communication, 28*, 497–513. <https://doi.org/10.1177/0267323113491349>
- Hasebrink, U. (2017). Media use: Central Europe. In P. Rössler (Ed.), *The international encyclopedia of media effects, Vol. 4* (pp. 1135–1146). Oxford, UK: Wiley Blackwell.
- Johansson, S. (2007). *Reading tabloids: Tabloid newspapers and their readers*. Huddinge, Sweden: Södertörns högskola.
- Joiner, T. (2010). *Myths about suicide*. Cambridge, MA: Harvard University Press.
- Joiner, T. (2011). Understanding and overcoming the myths of suicide: What goes on in the minds of those who attempt suicide. *Psychiatric Times, 28*, 1–5.
- Katz-Sheiban, B., & Eshet, Y. (2008). Facts and myths about suicide: A study of Jewish and Arab students in Israel. *Omega: Journal of Death and Dying, 57*, 279–298. <https://doi.org/10.2190/OM.57.3.d>
- Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Hass, A., ... Hendin, H. (2005). Suicide prevention strategies – a systematic review. *Journal of the American Medical Association, 294*, 2064–2074. <https://doi.org/10.1001/jama.294.16.2064>
- McKay-Semmler, K., Semmler, S. M., & Kim, Y. Y. (2014). Local news media cultivation of host receptivity in Plainstown. *Human Communication Research, 40*, 188–208. <https://doi.org/10.1111/hcre.12024>
- Mooij, M. K. de. (2014). *Global marketing and advertising: Understanding cultural paradoxes*. Thousand Oaks, CA: Sage.
- Morgan, M., & Shanahan, J. (2010). The state of cultivation. *Journal of Broadcasting & Electronic Media, 54*, 337–355. <https://doi.org/10.1080/08838151003735018>



- Neuringer, C. (1988). The meaning behind popular myths about suicide. *Omega: Journal of Death and Dying*, 18, 155–162. <https://doi.org/10.2190/RGHW-W8JT-8J6V-LQAJ>
- Niederkröthaler, T., Arendt, F., & Till, B. (2015). Predicting intentions to read suicide awareness stories: The role of depression and characteristics of the suicidal role model. *Crisis*, 36, 399–406. <https://doi.org/10.1027/0227-5910/a000344>
- Niederkröthaler, T., Reidenberg, D., Till, B., & Gould, M. (2014). Increasing help-seeking and referrals for individuals at risk for suicide by decreasing stigma: The role of mass media. *American Journal of Preventive Medicine*, 47, 235–243. <https://doi.org/10.1016/j.amepre.2014.06.010>
- Niederkröthaler, T., Till, B., Herberth, A., Voracek, M., Kapusta, N. D., Etzersdorfer, E., Strauss, M., & Sonneck, G. (2009). The gap between suicide characteristics in the print media and in the population. *European Journal of Public Health*, 19, 361–364. <https://doi.org/10.1093/eurpub/ckp034>
- Niederkröthaler, T., Voracek, M., Herberth, A., Till, B., Strauss, M., Etzersdorfer, E., ... Sonneck, G. (2010). The role of media reports in completed and prevented suicide – Werther versus Papageno effects. *British Journal of Psychiatry*, 197, 234–243. <https://doi.org/10.1192/bjp.bp.109.074633>
- Nielsen. (2014). *More of what we want: The cross-platform report, June 2014*. Retrieved from <http://www.nielsen.com/us/en/insights/reports/2014/more-of-what-we-want.html>
- Rehkopf, D. H., & Buka, S. L. (2006). The association between suicide and the socio-economic characteristics of geographical areas: A systematic review. *Psychological Medicine*, 36, 145–157. <https://doi.org/10.1017/S003329170500588X>
- Reinmann, C., Stanyer, J., Scherr, S., & Legnante, G. (2012). Hard and soft news: A review of concepts, operationalizations and key findings. *Journalism*, 13, 221–239. <https://doi.org/10.4236/jss.2015.311008>
- Samaritans. (2008). *Media guidelines for reporting suicide and self-harm*. Epsom, UK: Samaritans.
- 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.
- Schütte, C. (2008). Selbsttötung als Spektakel? Suiziddarstellungen in Boulevardzeitungen [Suicide as spectacle? Suicide portrayals in tabloid newspapers]. In A. Herberth, T. Niederkröthaler, & B. Till (Eds.), *Suizidalität in den Medien/Suicidality in the media: Interdisziplinäre Betrachtungen/Interdisciplinary contributions* (pp. 241–259). Münster, Germany: LIT.
- Schurtz, D. R., Cerel, J., & Rodgers, P. (2010). Myths and facts about suicide from individuals involved in suicide prevention. *Suicide and Life-Threatening Behavior*, 40, 346–352. <https://doi.org/10.1521/suli.2010.40.4.346>
- Schwarz, N., Sanna, L. J., Skurnik, I., & Yoon, C. (2007). Metacognitive experiences and the intricacies of setting people straight: Implications for debiasing and public information campaigns. *Advances in Experimental Social Psychology*, 39, 127–161. [https://doi.org/10.1016/S0065-2601\(06\)39003-X](https://doi.org/10.1016/S0065-2601(06)39003-X)
- Seibokaite, L., & Genutyte, D. (2015). The content of comments on articles describing suicide: Searching for causes, attitude, myths. *Psichologija*, 51, 44–57.
- Shrum, L. J., & O'Guinn, T. C. (1993). Processes and effects in the construction of social reality: Construct accessibility as an explanatory variable. *Communication Research*, 20, 436–471. <https://doi.org/10.1177/009365093020003005>
- Skurnik, I., Yoon, C., Park, D. C., & Schwarz, N. (2005). How warnings about false claims become recommendations. *Journal of Consumer Research*, 31, 713–724. <https://doi.org/10.1086/426605>
- Sonneck, G., Kapusta, N., Tomandl, G., & Voracek, M. (Eds.) (2016). *Krisenintervention und Suizidverhütung [Crisis intervention and suicide prevention]*. Vienna, Austria: Facultas.
- Statistik Austria. (2011). *Educational attainment of the Austrian population between 25 and 64 years, from 1971 to 2012 [Data file]*. Retrieved from [http://www.statistik.at/web\\_de/statistiken/bildung\\_und\\_kultur/bildungsstand\\_der\\_bevoelkerung/020912.html](http://www.statistik.at/web_de/statistiken/bildung_und_kultur/bildungsstand_der_bevoelkerung/020912.html)
- Statistik Austria. (2013). *Time use survey 2008/09*. Retrieved from [http://www.statistik.at/web\\_en/statistics/social\\_statistics/time\\_use/time\\_use\\_survey/index.html#index4](http://www.statistik.at/web_en/statistics/social_statistics/time_use/time_use_survey/index.html#index4)
- Stout, E., Rodgers, P., & Guard, A. (2008, April). *Is myth-busting counterproductive?* Poster presented at the 2008 American Association of Suicidology (AAS) Conference, Boston, MA.
- Till, B., Truong, F., Mar, R. A., & Niederkröthaler, T. (2016). Blurred world view: A study on the relationship between television viewing and the perception of the justice system. *Death Studies*, 40, 538–546. <https://doi.org/10.1080/07481187.2016.1186761>
- Truong, F. (2011). *Blurring reality: The relationship between American legal crime television Viewing and perception of Canadian justice system* (Unpublished honors thesis). York University, Toronto, Canada.
- Vereecken, C. A., Todd, J., Roberts, C., Mulvihill, C., & Maes, L. (2005). Television viewing behaviour and associations with food habits in different countries. *Public Health Nutrition*, 9, 244–250.
- Voracek, M., Tran, U. S., & Sonneck, G. (2008). Psychometric properties of the Revised Facts On Suicide quiz in Austrian medical and psychology undergraduates. *Death Studies*, 32, 937–950.
- Williams, K. (2010). *Read all about it! A history of the British newspaper*. London, UK: Routledge.
- World Health Organization. (2014). *Preventing suicide: A global imperative*. Geneva, Switzerland: Author.
- World Health Organization. (2017a). *Campaign essentials*. Retrieved from <http://www.who.int/campaigns/world-health-day/2017/campaign-essentials/en/>
- World Health Organization. (2017b). *Preventing suicide. A resource for media professionals: Update 2017*. Geneva, Switzerland: Author.
- Benedikt Till, DSc, is a psychologist and Assistant Professor at the Unit Suicide Research & Mental Health Promotion, Department of Social and Preventive Medicine, Center for Public Health, Medical University of Vienna. He is board member of the Wiener Werkstaette for Suicide Research and works in the field of media psychology and suicide research.
- Teresa Wild is a medical student at the Medical University of Vienna, Austria, and has completed her internship at the Unit Suicide Research & Mental Health Promotion, Department of Social and Preventive Medicine, Center for Public Health. She is also a member of the Wiener Werkstaette for Suicide Research.
- Florian Arendt, PhD, is a postdoctoral researcher at the Department of Communication Science and Media Research (LMU Munich), Germany. He is interested in research in health communication, media stereotyping, and political communication.
- Sebastian Scherr (PhD, University of Munich) is Assistant Professor at the School for Mass Communication Research, University of Leuven,

Belgium. His research interests focus on differential media uses and effects in health communication and political communication, with a special emphasis on suicide prevention and empirical methods.

Thomas Niederkrotenthaler, MD, PhD, MMS, is Associate Professor and head of the Suicide Research & Mental Health Promotion Unit, Department of Social and Preventive Medicine, Vienna, Austria. He is co-chair of the IASP's Media & Suicide Special Interest Group, and chairman of the Wiener Werkstaette for Suicide Research (<http://www.suizid.forschung.at>).

**Benedikt Till**

Unit Suicide Research & Mental Health Promotion  
Department of Social and Preventive Medicine  
Center for Public Health  
Medical University of Vienna  
Kinderspitalgasse 15  
1090 Vienna  
Austria  
[benedikt.till@meduniwien.ac.at](mailto:benedikt.till@meduniwien.ac.at)