ORIGINAL ARTICLE

Werther or Papageno? Examining the effects of news reports of celebrity suicide versus non-celebrity peer suicide on intentions to seek help among vulnerable young adults

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Abstract

Introduction: A large body of literature has examined the Werther effect following news reports of suicide, yet much less attention has been paid to the protective Papageno effect. This research explored the causal relationships between news reports of real celebrity suicides (e.g., pop-rock star Chester Bennington) and real non-celebrity "peer" suicides (e.g., college student Madison Holleran) and intentions to seek help.

Methods: Two survey experiments confirmed successful experimental manipulation ($N = 280$) and tested behavioral theory, clinical indicators, and intentions to seek help ($N = 641$) in samples of college students (18–25).

Results: Participants were motivated to seek help if they believed it could lead to positive outcomes, yet this was less likely among participants with depression. Exposure to news reports of non-celebrity suicides had a small positive effect on help-seeking intentions. Among participants with depression, news reports of celebrity suicides had a small positive effect on intentions.

Conclusions: This research could not establish Werther effects for either of the news reports. Exposure to news reports of non-celebrity suicides had a small positive effect on intentions overall, but young adults with higher levels of depression were slightly more motivated to seek help after viewing news reports of celebrity suicides.

KEYWORDS

college students, depression, health promotion, Papageno effect, suicide, suicide contagion, Werther effect

INTRODUCTION

Depression and suicide

In the U.S., suicide is the second leading cause of death among young adults under 25 years of age—more young adults die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia, influenza, and chronic lung disease combined (Curtin, 2020). The prevalence of the primary predictors of suicide, such as suicidal ideation and depression, as well as the overall disease burden, is also highest among young adults (CDC, 2020). The percentage of young adults (18–25) who had a major depressive episode in the past year increased from 8.8% in 2005 to 15.2% in 2019 (SAMSHA, 2020). Fortunately, the use of mental health services in this age group has increased concurrently, yet almost half of those with past year serious mental illness still express an unmet need for mental health services, indicating a critical need for effective interventions in this population (SAMSHA, 2020).

Promoting health behavior change

According to the reasoned action framework, young adults will engage in help-seeking if intentions are high and no environmental constraints or lack of skills interfere. Intentions are a function of attitudes (outcome and affective evaluations), perceived norms (perceived normative pressure and approval), and perceived control (perceived capacity and autonomy) (Fishbein & Ajzen, 2010; Yzer et al., 2015). Once the strongest determinant for intentions to seek help is known, health communication interventions should seek to influence or reinforce it. For example, if attitudes, such as outcome evaluations, show the strongest positive correlation with intentions, help-seeking interventions could highlight the potential positive outcomes of seeking help to effectively motivate young adults to seek help.

Although theoretically sound, this premise has shown to be difficult, particularly in populations affected by depression. Research has pointed to potential unintended negative effects ("boomerang effects") of well-intentioned help-seeking interventions, effectively *decreasing* intentions to seek help among those affected by depression (Lienemann & Siegel, 2019; Siegel et al., 2017). In addition, the influence of the larger media environment remains poorly understood (Salmon & Atkin, 2003), thus slowing efforts to improve media-based help-seeking interventions and increasing the risk of unintended negative effects.

The media as a risk factor for suicide

Guiding frameworks such as social cognitive theory (SCT) (Bandura, 1986) and cultivation theory (Gerbner & Gross, 1976) suggest people can learn how to perform certain behaviors by observing what they see in the media. Applied to suicide risk, a large body of research has examined whether depictions of suicide in the media could lead to observational learning and thus, an uptick in suicides in the population (Phillips, 1974). Non-fictional depictions of suicide have been at the center of these investigations (Ferguson, 2019; Pirkis & Blood, 2001; Stack, 2005), but have led to inconsistent results (Hittner, 2005; Niederkrotenthaler et al., 2007), leading to the overall conclusion that the effects of mediated depictions of non-fictional suicides are likely more nuanced and, at times, a "double-edged sword" (Domaradzki, 2021; Stack, 2020).

The largest meta-analysis to date of 55 studies containing 419 findings reported that over 60% of those findings do not support a copycat effect. Other authors have documented increases in suicides following non-fictional depictions of suicide in the media, especially when a celebrity suicide is seen as a role model ("Werther effect") (Lutter et al., 2020). Werther effects have been particularly prevalent in response to news reports of non-fictional celebrity suicides, particularly if the news reports inadvertently glamorize suicide or include information about the specific suicide method (Gould et al., 2014). Overall, about 10% of suicides among young adults under 25 have been attributed to the Werther effect following news reports of celebrity suicides (Niederkrotenthaler et al., 2012; Pirkis et al., 2006). Evolving research and more sophisticated methods in testing these effects, however, have also recently cast doubt on whether Werther effects consistently occur for media depictions of all celebrity suicides. Stack (2020), for example, has pointed out that the actual association between celebrity suicides and increases in suicides in the population is relatively weak and may only apply to entertainment and political celebrities.

Other research has pointed out that reports of non-celebrity suicides, too, can lead to an uptick in suicide rates if the victim shares a similar background or social status with the viewer (Niederkrotenthaler et al., 2009; Pirkis & Blood, 2001). In fact, the concept of social identification in particular has been identified as a psychological mechanism that determines the presence of the Werther Effect (Niederkrotenthaler & Till, 2019).

Protective effects of media depictions of suicide in the media have also been documented, but have received slightly less attention, which has led to calls for more

research in this area (Niederkrotenthaler & Till, 2019). Media depictions of suicide can have a protective influence and effectively *reduce* suicide risk among young adults, but only if media reporting guidelines are followed and if such reports include stories of healing and recovery from suicidal ideation ("Papageno effect") (Cheng et al., 2007; Gould, 2001; Romer et al., 2006; Till & Niederkrotenthaler, 2019). The efficacy of such guidelines, however, has not yet been thoroughly and empirically documented (Stack, 2020). To our knowledge, no research has examined intentions to seek help as an indicator for the Papageno effect in response to news reports of nonfictional suicides (celebrity and peer suicide), particularly among young adults affected by depression. This research is critically needed because young adults who are at increased risk for suicide are often the main target group for mediated help-seeking and suicide prevention interventions.

THE CURRENT STUDY

It remains unknown if news reports of celebrity and noncelebrity peer suicides can have protective effects among young adults affected by depression. Integrating health communication principles and media effects research, news reports of peer suicides, in particular, could lead to increased intentions to seek help among young adults, effectively acting as a fear appeal due to higher perceived susceptibility, thus reinforcing media-based intervention efforts (e.g., "danger control," see Tannenbaum et al., 2015; Witte & Allen, 2000).

This research explored the causal relationships between news reports of celebrity suicide and non-celebrity peer suicide and intentions to seek help among young adults under 25 years of age. We first tested our experimental manipulations in a sample of college students and then tested the effects in a separate sample of college students. We hypothesized the reasoned action framework would predict intentions to seek help in our sample (H1), higher levels of depression would reduce intentions to seek help (H2), but exposure to news reports of peer suicides would increase intentions to seek help (H3). We further predicted depression would influence the association between the reasoned action variables and intentions to seek help (H4), exposure to news reports of celebrity suicides and peer suicides would influence the association between the reasoned action variables and intentions to seek help (H5), and, finally, the influence of depression on intentions to seek help would depend on which news reports (celebrity suicide versus peer suicide) participants saw (H6).

PILOT-TESTING EXPERIMENTAL STIMULI IN A SAMPLE OF COLLEGE STUDENTS

Objective

The objective of this study was to pilot-test eight experimental stimuli (four news reports of male and female celebrity suicides and four news reports of male and female non-celebrity peer suicides) in the target population (college students aged 18–24) in order to determine the six experimental stimuli (three news reports of male and female celebrity suicides and three news reports of male and female non-celebrity peer suicides) to be tested.

Materials and Methods

Experimental stimuli

We created news reports about real celebrity suicides and real non-celebrity peer suicides. We aimed to achieve an effective balance of internal and external validity by depicting real suicides that actually occurred and by creating video-based news reports that isolate the variables of interest (celebrity vs. non-celebrity status). We picked male and female celebrities (AVICII, Chester Bennington, Kate Spade, and Simone Battle) and non-celebrity peers (Madison Holleran, Tara Condell, Tyler Hilinski, and Andrew Walker).

To remove confounding factors, we created videos that showed images with music and text in news-ticker format only, without news anchors. We were thus able to create videos that matched in duration (90 s), source (Google News), narrative style (the person, their life, and grieving family and friends), images, and music (see Figures A1–A16 in Appendix) (Knobloch-Westerwick & Lavis, 2017; Reeves & Geiger, 1994). Despite achieving a high level of control, we conducted extensive pre-testing of the stimuli to reveal any other potential confounding factors we may not have been aware of. All videos were created using Adobe Sparks.

Study design and participant characteristics

Upon approval by the university's ethical institutional review board, the Human Research Protection Program, an online experiment was conducted in Spring 2020 with undergraduate students at a large Southern university. Participants were recruited through the Department's subject pool in exchange for course credit. A total of 280 undergraduate students read the information sheet and proceeded to

complete the survey. All participants were randomly assigned to one of eight conditions (*celebrity conditions*: Chester Bennington, Kate Spade, Avicii; and Simone Battle; *non-celebrity peer conditions*: Tara Condell, Andrew Walker, Madison Holleran, and Tyler Hilinski). Upon completion of the study, participants viewed a thorough debriefing sheet that listed useful resources (e.g., information about the university's helpline, national helplines, local opportunities to seek in-person counseling, etc.).

Measures

Manipulation Check. We tested recognition of celebrity status and familiarity with several one-item statements, such as, "Is the person mentioned in the news report you just viewed considered a 'celebrity'?" (Yes/No), "How familiar are you with the person in the news report (e.g., familiarity with the name, profession, work, etc.)?" (0 = not familiar at all 0;10 = extremely familiar), "In your own opinion, how well-known do you believe the person in the news report is among your peers (college students)?" (0 = not well-known at all; 10 = extremely well-known), and "To what extent do you find the person discussed in the news report relatable?" (1 = not relatable at all; 5 = completely relatable).

Results

Celebrity vs. non-celebrity peer manipulation

In order to assess whether the manipulation was successful, we combined the 8 conditions into a celebrity (1) or peer (2) condition. A chi-square test confirmed that participants correctly identified celebrities and non-celebrities, $\chi^2 = (1, N = 276) = 220.69$, $p < 0.01$. Furthermore, independent sample *t*-tests revealed that participants were more familiar with the celebrities ($M = 4.26$, SD = 3.48) than the non-celebrities ($M = 0.77$, SD = 1.60), $t(274) = 10.66$, $p < 0.01$, that they thought their peers (college students) would be more familiar with the celebrities ($M = 5.19$, SD = 2.70) than the non-celebrities ($M = 1.48$, SD = 2.02), $t(273) = 12.90$, $p < 0.01$, and that the non-celebrities were more relatable ($M = 3.22$, SD = 1.10) than the celebrities ($M = 2.83$, SD = 1.15), $t(274) = -2.88$, $p < 0.01$. We thus deemed our manipulation successful.

Selection stimuli

Next, we compared how familiar participants were with the celebrities and non-celebrities, $F(7, 268) = 36.38$, $p < 0.01$, $\eta_p^2 = 0.49$. Although pairwise comparisons did not reveal statistically significant differences, mean scores indicated that participants were most familiar with Tyler Hilinski (compared to other non-celebrities) ($M = 1.00$, SD = 0.40) and least familiar with Simone Battle (compared to other celebrities) ($M = 1.26$, SD = 0.40). Similarly, when asked about how well-known participants believed the person in the news report to be among their peers, $F(7, 267) = 38.46$, $p < 0.01$, $\eta_p^2 = 0.50$, participants indicated that their peers would be most familiar with Tyler Hilinski (compared to other non-celebrities) ($M = 1.68$, SD = 0.37). Pairwise comparisons revealed statistically significant differences between Simone Battle and all other celebrities, indicating that, on average, participants did not believe their peers were as familiar with Simone Battle as a celebrity ($M = 2.80$, SD = 0.37).

Summary of findings

We decided to remove our experimental conditions including celebrity Simone Battle and non-celebrity peer Tyler Hilinski. Our final set of experimental stimuli to be tested thus included three celebrities (Chester Bennington, Kate Spade, and Avicii) and three non-celebrity peers (Tara Condell, Andrew Walker, and Madison Holleran).

SURVEY EXPERIMENT WITH COLLEGE STUDENTS

Objective

The primary objective was to test the relationships of the reasoned action determinants of intentions to seek help, levels of depression, and exposure to news reports of celebrity versus non-celebrity peer suicides.

Materials and methods

Experimental stimuli

Please see the pilot-test for information on pilot-testing and final selection of experimental stimuli (*celebrity conditions*: Chester Bennington, Kate Spade, and Avicii; *peer conditions*: Tara Condell, Andrew Walker, and Madison Holleran) (see Appendix and Appendix S1).

Study design and participant characteristics

Upon approval by the university's ethical institutional review board, the Human Research Protection Program, an online experiment was conducted in Summer 2020 with

undergraduate students at a large Southern university. Participants were recruited through the university's bulk mail service targeting the main campus of the university, as well as two satellite campuses. Students were able to provide their e-mail addresses for a chance to win 1 of 50 $20 Target e-gift cards. The recruitment e-mail was sent to 48,277 undergraduate students enrolled on the main campus and on two satellite campuses in June 2020, of which 22,251 students opened the e-mail (46.09% open rate). A sample of these students ($N = 1891$) then clicked the survey link in the e-mail, read the information sheet, and proceeded to the survey until we closed the survey due to sufficient sample size.

All participants were randomly assigned to one of seven conditions (*celebrity conditions*: Chester Bennington, Kate Spade, and Avicii; *non-celebrity peer conditions*: Tara Condell, Andrew Walker, and Madison Holleran). We also included a no-message control condition. Upon completion of the study, participants viewed a thorough debriefing sheet that listed useful resources (e.g., information about the university's helpline, national helplines, local opportunities to seek in-person counseling, etc.).

Pre-Exposure measures

Depression. Depression symptomatology was measured using the validated nine-item PhQ9 (Kroenke et al., 2001). A summated score represented the severity of depression symptoms, with higher scores indicating more severe depression symptoms, $\alpha = 0.87$. In this sample, clinical depression symptom scores ranged from zero to 27 ($M = 3.87$, SD $= 1.98$).

Post-Exposure measures

Manipulation Check. We tested recognition of celebrity status and familiarity with several one-item statements (see pilot study).

Reasoned Action Variables. Reasoned action items were created and modified to match the context (help-seeking) according to theory recommendations (Fishbein & Ajzen, 2010). We defined help-seeking as a problem-focused, planned behavior, involving interpersonal (in-person) or virtual (e.g., telemedicine) interaction with a selected health-care professional. It also included calling and/or texting a help-line. We considered primary physicians, psychologists, psychiatrists, social workers, and volunteers for a help-line, etc., as health-care professionals.

Intention was measured by asking participants, "How likely is it that you will contact a health-care professional to discuss your depression symptoms if you were to experience depression symptoms anytime in the next four weeks?" (1 = "very unlikely," 7 = "very likely") and by assessing the level of agreement to the statement, "I expect to contact a health-care professional to discuss my depression symptoms if I were to experience depression symptoms anytime in the next four weeks" (1 = "definitely do not expect to," 7 = "definitely expect to"). The two intention items correlated strongly, $r = 0.90$, $p < 0.01$, and were therefore averaged to create a behavioral intention scale.

Six 7-point semantic differential items measured instrumental and experiential *attitudes.* The stem, "My contacting a health-care professional to discuss my depression symptoms if I were to experience depression symptoms anytime in the next four weeks would be…" was followed by the items "harmful – beneficial," "foolish-wise," "bad – good," "unnecessary – necessary" (for *instrumental attitude*), and "not enjoyable – enjoyable," "stressful – relaxing," "unpleasant – pleasant," and "something I dislike – something I like" (for *experiential attitude*).[1] Scores on the two sets were averaged to yield indicators of instrumental attitude, $\alpha = 0.85$, and experiential attitude, $\alpha = 0.84$.

Perceived norms were also assessed with 7-point Likert scales. One injunctive norm measure asked participants, "How do you think most people important to you would feel about you contacting a health-care professional to discuss your depression symptoms if you were to experience depression symptoms anytime in the next four weeks?" Scale anchors ranged from "strongly disapprove" to "strongly approve." To measure descriptive norms, participants were asked, "How many of the people important to you do you think would contact a health-care professional themselves to discuss their depression symptoms if they were to experience depression symptoms anytime in the next four weeks?" Scale anchors ranged from "almost none" to "almost all."

The *perceived behavioral* control measure used a 7-point Likert scale and asked how confident participants were that they could contact a health-care professional despite various obstacles. Two semantic differential items were used for *perceived autonomy.* The stem, "My contacting a health-care professional to discuss my depression symptoms if I were to experience depression symptoms anytime in the next four weeks would be…" was followed by "not under my control – under my control" and "not up to me – up to me." The two items were averaged to form a perceived autonomy scale, $r = 0.50$, $p < 0.01$. To measure *perceived capacity* participants were asked if they could contact a health-care professional to discuss their depression symptoms if they were to experience depression symptoms anytime in the next 4 weeks despite a variety of obstacles (1 = completely sure I cannot, 7 = completely sure I can).

Analytical approach

While examining our data set, we detected a high number of missing data. We thus chose to restrict our analyses to only those cases who fit our targeted age range for young adults, 18–24 years, and those who responded to our control questions ($N=641$). The goal was to reduce erroneous conclusions about help-seeking intentions among participants whose current and previous help-seeking was unknown. We then split our experimental conditions into (1) news reports of celebrity suicides (Chester Bennington, Kate Spade, and Avicii) ($n=267$) and (2) non-celebrity peer suicides (Tara Condell, Andrew Walker, and Madison Holleran) ($n=261$), as well as a no-message control condition ($n=113$). We felt comfortable doing so because there were no statistically significant within-group differences on relevant key outcomes. We first sought to test the predictive power of the primary theoretical model in this study, the reasoned action framework, via regression analyses. We then tested the direct and relative influence of levels of depression and exposure to news reports of celebrity versus non-celebrity peer suicides via hierarchical regression analyses.

Results

Participant characteristics

We conducted our analyses with a portion of our data set restricted to participants who were 18–24 years of age and those who did not have missing values in response to our control questions ($N=641$). In this sample, the average age was 20 years ($M=20.35$, SD$=1.71$), most participants were female (79.9%) compared to male (20.1%), and most were White (73.3%). Average depression scores were on the upper end of "mild" depression ($M=8.42$, SD$=5.58$). Almost all participants indicated that they were not currently receiving treatment (89.5%). About half of the participants in this sample indicated that they had never received treatment in their lifetime (55.7%). Throughout the remainder of this report, we will refer to these seven variables as our control variables (see Table 1).

Random assignment

Random assignment to the experimental conditions and control conditions was successful. None of the demographic variables (age, sex, race, ethnicity) or levels of depression differed by either the set of seven conditions

TABLE 1 Demographic characteristics and controls in restricted study sample ($N=641$).

Demographic characteristics	Frequency (%)	M (SD)
Sex		
Male	129 (20.1%)	
Female	512 (79.9%)	
Age		20.35 (1.71)
Race		
White	470 (73.3%)	
Other Asian	86 (13.2)	
Asian Indian	44 (6.9%)	
Black/African American	15 (2.3%)	
Other	16 (2.5%)	
Ethnicity		
Not Hispanic	471 (73.5%)	
Mexican, Mex. American, Chicano	109 (17%)	
Other Hispanic, Latino, Spanish	61 (9.6%)	
Depression (PHQ9)		8.42 (5.58)
Ever looked for info about suicide for yourself/others?		
Yes	231 (36%)	
No	410 (64%)	
Ever researched an individual's suicide/attempt?		
Yes	292 (45.6%)	
No	349 (54.4%)	
Has nature of studies, experiences, etc. w/suicide made you seek out/pay more attention to news reports of suicide?		
Yes	205 (32%)	
No	436 (68%)	
Contacted a health-care prof. in past 12 months?		
Yes	151 (23.6%)	
No	490 (76.4%)	
Made app. w/health-care prof. in past 12 months?		
Yes	151 (23.6%)	
No	490 (76.4%)	
Received counseling/therapy in past 12 months?		
Yes	154 (24%)	
No	487 (76%)	
Currently receiving counseling/therapy?		
Yes	67 (10.5%)	
No	574 (89.5%)	
Ever in lifetime received counseling/therapy?		
Yes	284 (44.3%)	
No	357 (55.7%)	

Note: All help-seeking control variables asked about both virtual and in-person contact, appointments, and counseling/therapy to discuss symptoms of depression.

(six experimental conditions and one control group) or the set of three conditions (celebrity suicide condition, non-celebrity peer suicide condition, and control condition).

Manipulation checks

Utilizing the two experimental groups, we confirmed that participants (>92%) correctly identified celebrities and non-celebrities, $\chi^2 = (1, N = 528) = 427.35, p < 0.01$. Furthermore, independent sample t-tests revealed that participants were more familiar with the celebrities ($M = 4.66$, SD = 1.83) than the non-celebrities ($M = 1.94$, SD = 1.47), $t(526) = -18.75, p < 0.01$, that they thought their peers (college students) would be more familiar with the celebrities ($M = 5.03$, SD = 1.57) than the non-celebrities ($M = 2.46$, SD = 1.74), $t(526) = -17.85, p < 0.01$, and that the non-celebrities in the news reports were more relatable ($M = 3.11$, SD = 1.26) than the celebrities ($M = 2.83$, SD = 1.20), $t(525) = 2.64, p < 0.01$. We thus deemed our manipulation successful.

Preliminary analyses

All reasoned action variables strongly and positively correlated with intentions to seek help. Overall, participants indicated more positive instrumental attitudes ($M = 5.27$, SD = 1.30; 7 pt scale) than experiential attitudes about help-seeking ($M = 3.53$, SD = 1.16; 7 pt scale), indicating that participants were more convinced of the positive outcomes of help-seeking and slightly less convinced that help-seeking would be a pleasant experience. Whereas participants indicated that most important others would approve of their help-seeking if they chose to do so ($M = 5.43$, SD = 1.51; 7 pt scale), they were much less certain that such important others would seek help themselves if they needed it ($M = 3.47$, SD = 1.61; 7 pt scale). Participants felt slightly less capable ($M = 4.99$, SD = 1.70; 7 pt scale) than autonomous ($M = 5.12$, SD = 1.38; 7 pt scale) to seek help. Average intentions to seek help crossed the scale mid-point ($M = 3.87$, SD = 1.98; 7 pt scale). Correlation analyses revealed that depression scores were weakly but positively correlated with being female ($r = 0.10$, $p < 0.05$) and Mexican ($r = 0.09$, $p < 0.05$), and negatively correlated with intentions ($r = -0.09$, $p < 0.05$), instrumental attitude ($r = -0.12$, $p < 0.01$), experiential attitude ($r = -0.08$, $p < 0.05$), injunctive norm ($r = -0.12$, $p < 0.01$), descriptive norm ($r = -0.09$, $p < 0.05$), capacity ($r = -0.22$, $p < 0.01$), and autonomy ($r = -0.15$, $p < 0.01$) (see Table 2).

Main effects of RAT, depression, and condition on intention

> **H1.** The reasoned action variables predict intentions to seek help

The objective was to test the predictive power of reasoned action variables on intentions to seek help in this sample of college students. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female = 1), age, and control variables at step 1 and the reasoned action variables at step 2. The reasoned action variables added a substantive amount of variance to the model ($R^2_{\text{Change}} = 0.26, p < 0.01$). Intention was primarily a function of instrumental attitude, $\beta = 0.28, p < 0.01$. The total model explained 44% of the variance in intentions, $F(16, 614) = 31.80, p < 01, R^2_{\text{Adj}} = 0.44$. Hypothesis 1 was therefore supported (see Table 3).

> **H2.** Those with higher levels of depression show lower levels of intentions to seek help

The objective was to test whether participants with higher levels of depression were less likely to intend to seek help compared to those with lower levels of depression. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female = 1), age, and control variables at step 1 and the depression variable (PHQ9) at step 2. Overall, the addition of the depression variable added only a small amount of variance to the model ($R^2_{\text{Change}} = 0.02$, $p < 0.01$), but depression was negatively associated with intentions ($\beta = -0.14, p < 0.01$). The total model explained 19% of the variance in intentions, $F(11, 626) = 14.98, p < 01$, $R^2_{\text{Adj}} = 0.19$. Hypothesis 2 was thus partially supported.

> **H3.** Exposure to news reports of non-celebrity peer suicides is associated with higher levels of intentions to seek help compared to exposure to news reports of celebrity suicides

The objective was to test whether exposure to news reports of non-celebrity peer suicides would motivate participants to seek help more so than news reports of less relatable celebrity suicides. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female = 1), age, and control variables at step 1, and the two dummy-coded condition variables (one dummy variable for celebrity condition and one dummy variable for non-celebrity condition) at step 2. Overall, the addition of the condition variables added only a small amount of variance to the model ($R^2_{\text{Change}} = 0.01$, $p < 0.01$), but

TABLE 2 Correlation matrix for key variables in restricted sample ($N = 641$).

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Intention														
2. Inst Att	0.51**													
3. Exp Att	0.38**	0.36**												
4. Inj Norm	0.36**	0.40**	0.19**											
5. Des Norm	0.32**	0.13**	0.19**	0.34**										
6. Capacity	0.38**	0.31**	0.19**	0.40**	0.30**									
7. Autonomy	0.28**	0.44**	0.16**	0.32**	0.11**	0.35**								
8. Depression	−0.09*	−0.17**	−0.08*	−0.12**	−0.09*	−0.22**	−0.15**							
9. Info-Seek 1[D]	−0.05	−0.06	−0.06	−0.02	−0.09*	−0.15**	−0.10*	0.28**						
10. Interest[D]	0.10*	0.03	−0.01	0.04	−0.06	−0.09*	−0.00	0.21**	0.41**					
11. 12M App[D]	0.29**	0.20**	0.05	0.16**	0.01	0.09	0.14**	0.23**	0.20**	0.24**				
12. 12M Treat[D]	−0.33**	−0.24**	−0.08*	−0.21**	−0.06	−0.17**	−0.18**	−0.16**	−0.13**	−0.19**	−0.74**			
13. Curr Treat[D]	0.36**	0.20**	0.09*	0.14**	0.05	0.17**	0.08*	0.11**	0.18**	0.21**	0.53**	−0.58**		
14. Life Treat[D]	0.23**	0.17**	0.01	0.16**	−0.01	0.17**	0.10*	0.12**	0.17**	0.16**	−0.59**	−0.59**	0.36**	
N	641	639	638	640	634	637	638	638	641	641	641	641	641	641
M	3.87	5.27	3.53	5.43	3.47	4.99	5.12	8.42	0.36	0.32	0.24	1.76	0.10	0.44
SD	1.98	1.30	1.16	1.51	1.61	1.70	1.38	5.58	0.48	0.45	0.43	0.43	0.31	0.50

Note: Intention, Inst Att (Instrumental Attitude), Exp Att (Experiential Attitude), Inj Norm (Injunctive Norm), Des Norm (Descriptive Norm), Capacity, and Autonomy were assessed on 7-pt Likert Scales; depression was assessed with the PHQ9 and yielded a summated score (ranging from 0 to 27); D (Dummy-Coded) variables include Info-Seek 1 ("Have you ever looked for information, online or offline, about suicide for yourself, your family, or someone you know?"), Interest ("Has the nature of your studies, employment, interests, or personal experience with suicide made you seek out or pay more attention to news reports of celebrity or peer suicide?"), 12M App ("In the past 12 months, have you made an appointment, virtually or in person, with a health-care professional to discuss symptoms of depression?"), 12M Treat ("In the past 12 months, have you received counseling or therapy from a health-care professional, virtually or in person?"), Curr Treat ("Are you currently receiving counseling or therapy from a health-care professional, virtually or in person?"), and Life Treat ("Have you ever in your life received counseling or therapy from a health-care professional?") (1 = yes, 0 = no); for the purposes of this study, we asked participants to think of primary care physicians, psychologists, psychiatrists, social workers, community health worker, helpline volunteer as "health-care professionals;" we omitted two variables from this table for the purposes of clarity and to avoid redundant information, Info-Seek 2 ("Have you ever researched, online or offline, an individual's, celebrity or peer, suicide or suicide attempt?") and 12M Contact ("In the past 12 months, have you contacted, virtually or in person, a health-care professional to discuss symptoms of depression?"). *$p < 0.05$ (two-tailed); **$p < 0.01$ (two-tailed).

TABLE 3 Effects of attitude, norms, and perceived control on intention to seek help.

Intention to seek help

Variable	Model 1			Model 2		
	B	**SE B**	**β**	**B**	**SE B**	**β**
Sex (female)[D]	0.43	0.18	0.09*	0.21	0.15	0.04
Age	0.09	0.04	0.08*	0.00	0.04	0.00
Info-Seek 1[D]	−0.62	0.17	−0.15**	−0.27	0.14	−0.07
Info-Seek 2[D]	−0.15	0.16	−0.04	−0.17	0.13	−0.04
Interest[D]	0.26	0.18	0.06	0.35	0.15	0.08*
12 M Contact[D]	−0.72	0.42	−0.16	−0.60	0.35	−0.13
12 M App[D]	0.82	0.40	0.18*	0.75	0.33	0.16*
12 M Treat[D]	−0.68	0.29	−0.15*	−0.22	0.24	−0.05
Curr Treat[D]	1.63	0.30	0.25**	1.21	0.25	0.19**
Life Treat[D]	0.16	0.18	0.04	0.16	0.15	0.04
Inst Att				0.43	0.06	0.28**
Exp Att				0.32	0.06	0.19**
Inj Norm				0.05	0.05	0.04
Des Norm				0.22	0.04	0.18**
Capacity				0.15	0.04	0.13**
Autonomy				0.01	0.05	0.01
R^2_{Ad}	0.18			0.44		
F for change in R^2	15.13**			48.09 **		

Note: D (Dummy-Coded) variables include Info-Seek 1 "Have you ever looked for information, online or offline, about suicide for yourself, your family, or someone you know?, Info-Seek 2 "Have you ever researched, online or offline, an individual's, celebrity or peer, suicide or suicide attempt?", Interest ("Has the nature of your studies, employment, interests, or personal experience with suicide made you seek out or pay more attention to news reports of celebrity or peer suicide?"), 12 M Contact (In the past 12 months, have you contacted, virtually or in person, a health-care professional to discuss symptoms of depression?), 12 M App ("In the past 12 months, have you made an appointment, virtually or in person, with a health-care professional to discuss symptoms of depression?"), 12 M Treat ("In the past 12 months, have you received counseling or therapy from a health-care professionally, virtually or in person?"), Curr Treat ("Are you currently receiving counseling or therapy from a health-care professional, virtually or in person?"), and Life Treat ("Have you ever in your life received counseling or therapy from a health-care professional?") (1 = yes, 0 = no); Intention, Inst Att (Instrumental Attitude), Exp Att (Experiential Attitude), Inj Norm (Injunctive Norm), Des Norm (Descriptive Norm), Capacity, and Autonomy were assessed on 7-pt Likert Scales; depression was assessed with the PHQ9 and yielded a summated score (ranging from 0 to 27); for the purposes of this study, we asked participants to think of primary care physicians, psychologists, psychiatrists, social workers, community health worker, helpline volunteer as "health-care professionals". *$p < 0.05$ (two-tailed); **$p < 0.01$ (two-tailed).

exposure to news reports of non-celebrity peer suicides was positively associated with intentions to seek help ($\beta = 0.15$, $p < 0.01$). Exposure to news reports of celebrity suicides was not associated with intentions to seek help ($\beta = 0.09$, $p < 0.01$). The total model explained 19% of the variance in intentions, $F(12, 628) = 13.12$, $p < 01$, $R^2_{Adj} = 0.19$. Hypothesis 3 was thus partially supported.

Conditional effects of RAT, depression, and news reports on intention

H4. Depression influences the associations between reasoned action variables and intentions to seek help

The objective was to test whether theoretical predictions were impacted by how depressed participants felt at the time of the study. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female = 1), age, and control variables at step 1, the centered depression variable (PHQ9) at step two, the centered reasoned action variables at step 3, and the product terms of the depression variable and the centered reasoned action variables at step 4. The interaction term added only a small amount of variance to the model at step 4 ($R^2_{Change} = 0.02$, $p < 0.01$), but the interaction term of depression and instrumental attitude was statistically significant ($\beta = -0.14$, $p = 0.01$). The total model explained 45% of the variance in intentions, $F(23, 604) = 23.42$, $p < 01$, $R^2_{Adj} = 0.45$. Hypothesis 4 was thus partially supported.

H5. Exposure to news reports of celebrity versus non-celebrity peer suicides influences the associations between reasoned action variables and intentions to seek help

The objective was to test whether theoretical predictions were impacted by which news report participants saw. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female $= 1$), age, and control variables at step 1, the dummy-coded condition variables at step 2, the centered reasoned action variables at step 3, and the product terms of the dummy-coded condition variables and centered reasoned action variables at step 4. The interaction term did not add substantive variance to the model at step 4 ($R^2_{Change} = 0.002$, $p = 1.00$). Hypothesis 5 was thus not supported.

H6. The influence of depression on intentions to seek help depends on which news report participants viewed

The objective was to test whether the effects of depression on intentions depends on which news report participants saw. To test this hypothesis, a hierarchical linear regression analysis was conducted with sex (female $= 1$), age, and control variables at step 1, the dummy-coded condition variables and centered depression variable at step 2, and the product terms of the dummy-coded condition variables and centered depression variable at step 3. The total model explained 21% of the variance in intentions, $F(15, 622) = 12.31$, $p < 01$, $R^2_{Adj} = 0.21$. The interaction term added only a small amount of variance to the model at step 3 ($R^2_{Change} = 0.01$, $p < 0.05$), but the interaction term of depression and exposure to news reports of celebrity suicide was statistically significant ($\beta = 0.17$, $p = 0.01$) (see Figure 1). Those with higher levels of depression showed a slight increase in intentions after viewing the news reports of celebrity suicides and a slight decrease in intentions after viewing the news reports of non-celebrity peer suicides. Exposure to either one of the news reports increased intentions over and above the no-message control condition for those with higher levels of depression. Hypothesis 6 was thus supported.

Summary of findings

The reasoned action framework explained 44% of the variance in help-seeking intentions in our sample of college students. Intention was primarily a function of instrumental attitude or outcome expectations of seeking help, yet those with higher levels of depression showed lower intentions to seek help. Exposure to news reports of non-celebrity peer suicides appeared to have a small positive direct effect on intentions across participants, but did not influence the predictors of intention (i.e., attitude, social norms, perceived self-efficacy). Interestingly, those with higher levels of depression showed slightly higher intentions to seek help after viewing the news reports of celebrity suicides and slightly lower intentions to seek help after viewing the news reports of non-celebrity peer suicides. Both types of news reports, however, increased intentions to seek help over and above the no-message control condition for those with higher levels of depression.

DISCUSSION

This research explored the causal influence of news reports of celebrity suicides and non-celebrity peer suicides on intentions to seek help among vulnerable college students. We first tested our experimental manipulations in a sample of college students and then tested the effects of the experimental manipulations (news reports of celebrity and non-celebrity peer suicides) on intention to seek help in another sample of college students.

Main findings

The reasoned action framework explained 44% of the variance in help-seeking intentions in our sample of undergraduate students, thus confirming H1. This research also revealed that the strongest predictor of help-seeking intentions in this population was instrumental attitude (i.e., the expectation that seeking help would lead to positive outcomes). Thus, the more participants believed that help-seeking would lead to positive outcomes, the higher their intentions to seek help. Unfortunately, our research also confirmed that those who need help the most are least likely to seek help (Barney et al., 2006; Siegel et al., 2017). Confirming H2, we found a negative association between depression and intentions to seek help, underscoring the critical need for effective health promotion to increase help-seeking among college students who are disproportionally affected by depression (Kim et al., 2021). To increase help-seeking intentions among college students, interventions should thus reinforce positive outcome expectations (Fishbein & Ajzen, 2010; Fishbein & Yzer, 2003; Zorrilla et al., 2019).

In addition to addressing the factors that determine help-seeking, researchers have examined the factors that increase suicide risk in order to inform interventions, overall media guidelines, and best practices of covering suicide in the media (Niederkrotenthaler
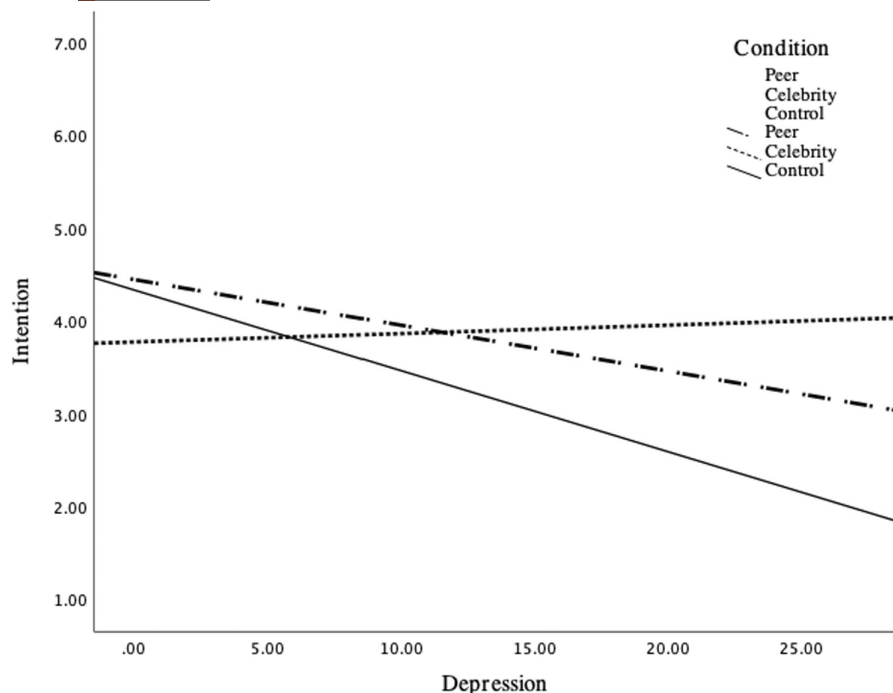
FIGURE 1 Interaction effect of depression and condition on intention.

et al., 2010, 2020). Previously, researchers have identified news reports of non-fictional celebrity suicides (e.g., entertainers and political figures) as possible risk factors for suicide ("Werther effect") (Niederkrotenthaler et al., 2009, 2012, 2020; Phillips, 1974; Pirkis et al., 2006; Stack, 2003), but have also pointed to possible protective effects ("Papageno effect") (Niederkrotenthaler et al., 2010). In this context, theoretical frameworks have explained the Werther effect vis-à-vis observational learning and identification with the victim (Niederkrotenthaler et al., 2009; Sisask & Värnik, 2012; Stack, 2005). Still, emerging meta-analyses using sophisticated methods have called into question the systematic occurrence of Werther effects, as well as the usefulness of media guidelines sans much-needed empirical evidence supporting their effectiveness (e.g., which specific guideline is effective and why) (Stack, 2020; Williams & Witte, 2018).

We were particularly interested in the possible protective effects of news reporting of non-fictional peer suicides ("Papageno effect"), using intentions to seek help as a primary protective outcome variable. We also aimed to distinguish between news reports of celebrity suicides and non-celebrity peer suicides to help clarify the role of celebrity status in determining effects. We predicted that news reports of non-celebrity peer suicides could effectively act as fear appeals, and thus increase intentions to seek help due to higher levels of identification and perceived susceptibility (Tannenbaum et al., 2015; Witte & Allen, 2000). Such positive effects of fear appeals have primarily been found among individuals who know how to effectively reduce the threat (risk for suicide), which seems to have

been the case in our sample of college students due to high levels of self-efficacy.

Across all participants regardless of depression, exposure to news reports of non-celebrity peer suicides had a small positive effect on intentions, whereas exposure to news reports of celebrity suicides did not (confirming H3). This was not the case for participants affected by depression. We were unable to confirm H4 because the news reports did not indirectly impact intentions by influencing determinants (i.e., attitudes, social norms, perceived self-efficacy). Among participants affected by depression, however, exposure to news reports of celebrity suicides *increased* intentions to seek help slightly whereas exposure to news reports of non-celebrity peer suicides *decreased* intention to seek help slightly (thus confirming H6). Intentions in both experimental groups were still higher than those in the no-message control group. Pending subsequent replication studies and further confirmation of the reported findings, our results thus suggest neither exposure to the news reports of celebrity suicides nor the exposure to news reports of non-celebrity peer suicides decreased intentions to seek help among college students affected by depression. In addition, our exploratory findings reveal that exposure to news reports of celebrity suicides could have a slight *positive* effect on help-seeking intentions among college students affected by depression, although the overall effects in our study were small.

These results stand in contrast to a majority of previous research findings that have suggested younger adults with depression are particularly susceptible to the Werther effect following exposure to news reports

of celebrity suicides (Fu & Yip, 2009; Park et al., 2016). Findings are more consistent with previous research that has called into question the strength and systematic occurrence of Werther effects after exposure to celebrity suicides in the media (Stack, 2020). We are cautiously optimistic that the protective effects of news reports of celebrity suicides are plausible among younger adults if certain conditions are met (Romer et al., 2006). For example, news reports of both celebrity and non-celebrity peer suicides *could* act as catalysts for help-seeking among young adults affected by depression. Until replication studies and much-needed rigorous and nuanced empirical evidence exist, however, we concur with Sinyor and colleagues (2018) and conclude that "suicide is a complex phenomenon that is influenced by many factors, of which the media is only one" (pg. 906).

Limitations

The samples in both studies are not representative of the entirety of the college student population in the U.S. and results should thus be interpreted with caution. We attempted to create and test news reports of real celebrity and non-celebrity peer suicides that resembled existing naturalistic depictions of suicide in the news media while controlling for possible confounding factors, yet we recognize that our approach was imperfect. Our experimental manipulations are unlikely to be representative of all news reports of celebrity and non-celebrity peer suicides in the media. News reports tested in this study did not give an exhaustive account of the characteristics of the individual and all possible influencing factors that increased their suicide risk (e.g., drug abuse, previous psychiatric diagnoses or lack of help-seeking, personal struggles, etc.). Relatedly, the individual depicted in the news report did not always match, or even present a close match, with the population of interes regarding age, sex, lifestyle, and influencing factors. We acknowledge that results may have differed had there been a closer match between the depicted individuals and our population of interest.

In addition, some participants in our sample did not correctly identify the status (celebrity vs. non-celebrity) of the person depicted in the news report. We prioritized the testing of the protective Papageno effect in our research and utilized help-seeking intentions as a possible indicator for such an effect. In doing so, we were unable to test other relevant mechanisms related to both the Papageno effect and Werther effect, and thus refer to the broader literature for more nuanced empirical findings (Bakst et al., 2019; Fu & Chan, 2013; Niederkrotenthaler et al., 2020).

Suggestions for future research

Future empirical work should provide further clarification on the Papageno effect in vulnerable populations, such as younger adults affected by depression. Given our findings, we encourage experimental studies to test the potential positive effects of exposure to news reports of celebrity and non-celebrity peer suicides, using help-seeking intentions and other related outcomes as indicators. Such research should also test whether more detailed reporting of the celebrity's or non-celebrity peer's lack of previous help-seeking or, alternatively, previous help-seeking that helped overcome suicidal ideation, could influence outcomes among young adults, depending on a variety of potential moderating variables (e.g., gender, age, etc.).

CONCLUSIONS

The reasoned action framework explained a large amount of variance in help-seeking intentions in our sample of college students and instrumental attitude was a particularly strong predictor. Intentions were low among those who were affected by depression. This research revealed positive, albeit small, effects of exposure to news reports of celebrity suicides on intentions to seek help among college students affected by depression. It failed to establish any negative effects resulting from exposure to news reports of celebrity or non-celebrity peer suicides on intentions to seek help among those affected by depression over and above our no-message control condition.

CONFLICT OF INTEREST STATEMENT
The authors report no conflict of interest.

DATA AVAILABILITY STATEMNET
The data that support the findings of this study are available from the corresponding author upon reasonable request.

ENDNOTE
[1] A principal component analysis (varimax orthogonal rotation with Kaiser normalization; variance explained: 70%, KMO =0.83; Bartlett's test, $p < 0.001$) suggested that all items loaded onto these two factors.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX

FIGURE A1   Example screenshot celebrity condition (Chester Bennington).

FIGURE A4   Example screenshot celebrity condition (Chester Bennington).

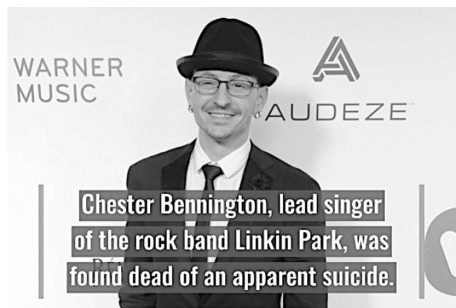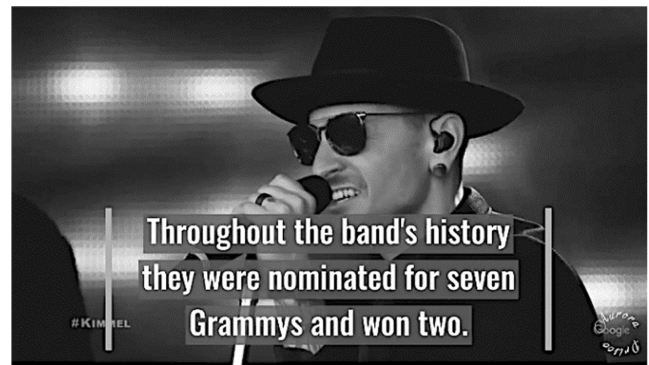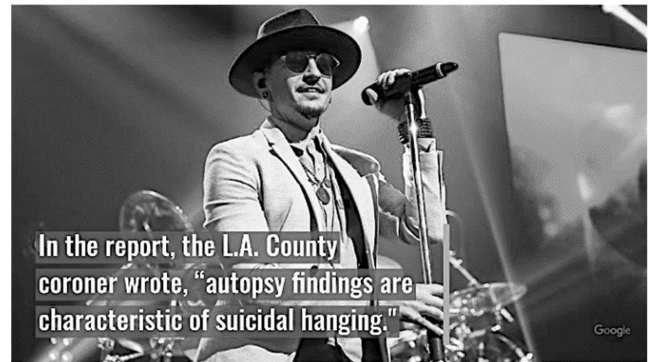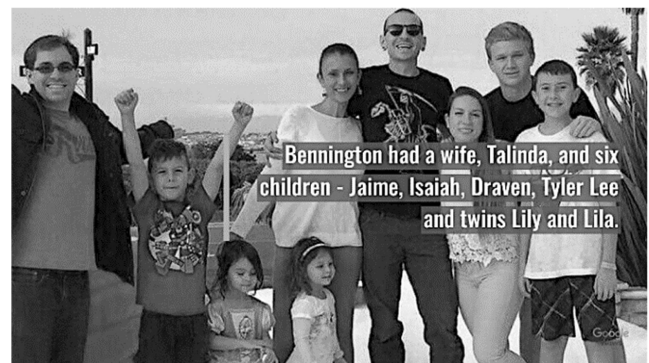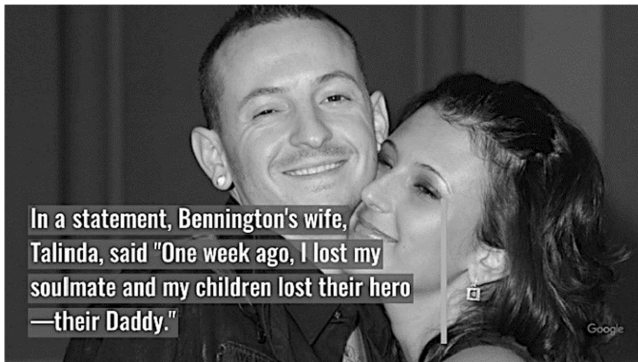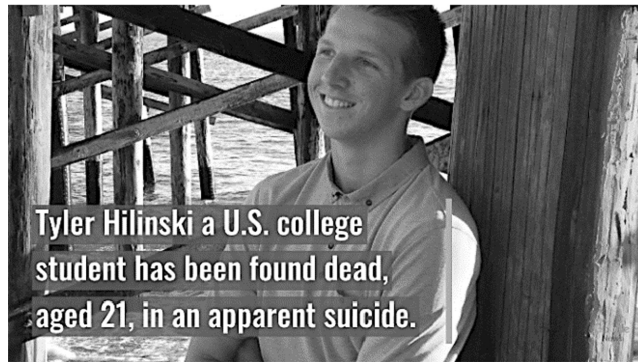**FIGURE A2**   Example screenshot celebrity condition (Chester Bennington).

FIGURE A5   Example screenshot celebrity condition (Chester Bennington).

FIGURE A3   Example screenshot celebrity condition (Chester Bennington).

FIGURE A6   Example screenshot celebrity condition (Chester Bennington).

FIGURE A7 Example screenshot celebrity condition (Chester Bennington).

FIGURE A8 Example screenshot celebrity condition (Chester Bennington).
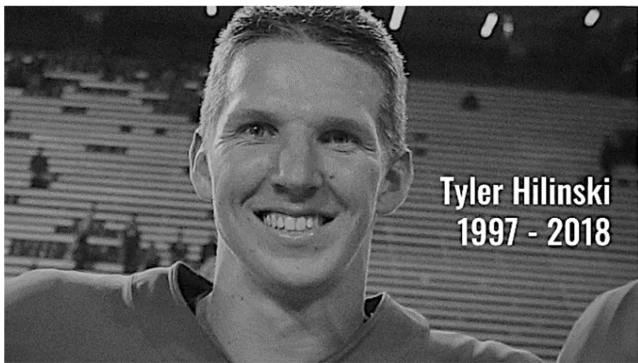

FIGURE A9 Example screenshot non-celebrity peer condition (Tyler Hilinski).

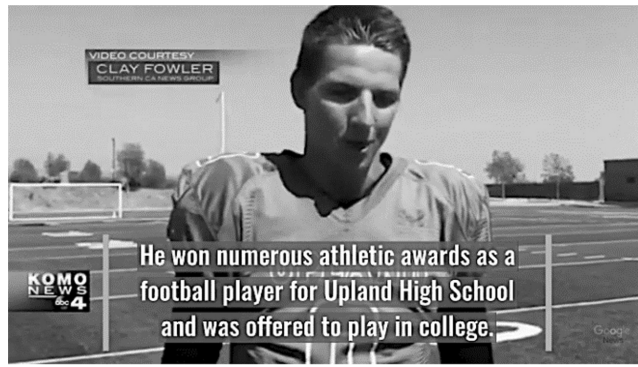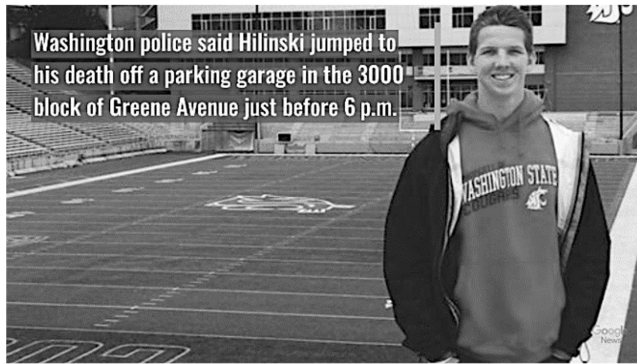**FIGURE A10** Example screenshot non-celebrity peer condition (Tyler Hilinski).

FIGURE A11 Example screenshot non-celebrity peer condition (Tyler Hilinski).

FIGURE A12 Example screenshot non-celebrity peer condition (Tyler Hilinski).

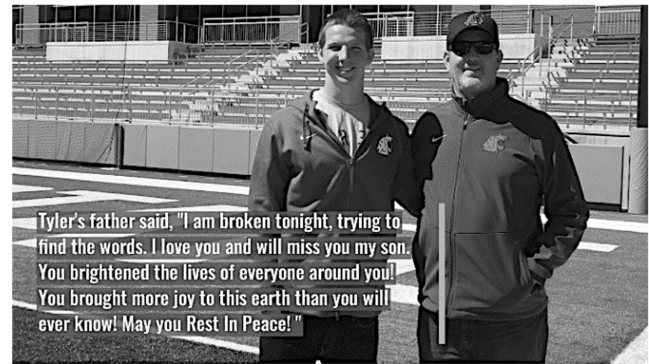**FIGURE A13** Example screenshot non-celebrity peer condition (Tyler Hilinski).

FIGURE A15 Example screenshot non-celebrity peer condition (Tyler Hilinski).

FIGURE A14 Example screenshot non-celebrity peer condition (Tyler Hilinski).

FIGURE A16 Example screenshot non-celebrity peer condition (Tyler Hilinski).