

## The Emotional Impact and Ease of Recall of Warning Signs for Suicide: A Controlled Study

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In light of concerns about potential iatrogenic effects of information about suicide, in the current study we examined the emotional impact of reading a list of warning signs for suicide in comparison to comparable lists for heart attacks and diabetes. All participants read two sets of warning signs, with the experimental group reading the suicide warning signs. Results confirm no difference in emotional impact across groups, along with providing evidence that warning signs for suicide are as easy to recall after exposure as warning signs for heart attack. Implications for public health campaigns are discussed.

A common public health strategy in the prevention of disease involves disseminating warning signs to promote awareness (recognition), and thus early detection and referral for evaluation and treatment. Advocates for the distribution of and familiarity with warning signs for conditions such as heart disease and diabetes (Carter, 2004; Lee, 2004; "Survey Shows," 1998) suggest early recognition by a better educated public will minimize the damage that can be done by these conditions and encourage better health. Similarly, the dissemination of warning signs for suicide may allow for early detection of those at high risk for suicide, with the potential to save lives.

The rationale for early detection as a

suicide prevention strategy (Gould et al., 2005) is similar to that used by the American Psychological Association which, in collaboration with MTV, developed and disseminated warning signs for youth violence (Peterson & Newman, 2000). The effects of distributing warning signs for suicide, however, are less clearly understood or agreed upon than are those for other health conditions. Specifically, some have raised the concern that exposure to subject matter about suicide may have negative, iatrogenic effects (*cf.* Gould et al., 2005; Shaffer et al., 1990).

### WARNING SIGNS: A POORLY UNDERSTOOD CONCEPT

In the scientific literature, warning signs for suicide remain a largely undefined and understudied construct. Only recently has an attempt been made to establish a clear definition of warning signs for suicide as distinct from risk factors (Rudd, 2003; Rudd et al., 2006). Few empirical studies have investigated the validity of currently disseminated

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warning signs. Rudd et al. provide a brief review of the limited literature and conclude that few studies have investigated the variables that are related to near-term risk (within minutes, hours, or days) for suicide. An examination of warning signs for suicide posted on the Internet (Mandrusiak et al., 2006) revealed that although some warning signs were more frequently mentioned than others, there was little consistency in reporting.

A working group was established in 2003 by the American Association of Suicidology (AAS) to review the empirical research and establish a consensus set of warning signs for suicide (Rudd et al., 2006). Although the working group was able to reach consensus on warning signs, there is no empirical evidence to date exploring the effect of distributing warning signs for suicide in the general population (Rudd et al., 2006). Despite this lack of understanding, warning signs for suicide have often been distributed to adolescents as part of suicide awareness curriculums administered through school suicide awareness and prevention programs, and recently questions have been raised about the potential for iatrogenic effects (*cf.* Gould et al., 2005; Nelson, 1987; Shaffer et al., 1990).

#### **POTENTIAL NEGATIVE EFFECTS OF EXPOSURE**

Evaluation of suicide awareness and prevention programs have yielded mixed results, failing to alleviate a common and persistent concern that exposure to suicide-related content may actually have negative, or iatrogenic, effects. A review by Gould et al. (2003) found that while some studies reported improvements in attitude, knowledge, and help-seeking behaviors, other studies found no effect (e.g., Vieland, Whittle, Garland, Hicks, & Shaffer, 1991) and some negative effects (Overholser, Hemstreet, Spirito & Vyes, 1989; Shaffer et al., 1990). Shaffer et al. evaluated three such suicide intervention programs. One of the common goals they mentioned of such programs was to provide information about warning signs for poten-

tially suicidal teenagers, with the aim of promoting early recognition and intervention; however, they found no evidence of positive effects of the program. Instead, they found that adolescents who had previously attempted suicide responded that talking about suicide could make some at-risk adolescents more likely to attempt suicide and that these previous attempters were less likely to recommend the program to others. Another study found that while female high school students tended to respond positively to a suicide awareness program, males students demonstrated increased levels of hopelessness, maladaptive attitude changes, and increased reliance on maladaptive coping strategies (Overholser et al., 1989).

#### *Iatrogenic Effects in the Literature*

The possibility that exposure to suicide-related content or treatments can actually have a negative effect has some precedent in the literature. Phillips (1974) offered the first of many studies suggesting that media coverage leads to an imitation effect or "contagion." While some subsequent analyses have found incidents where media coverage led to an actual increase in suicide (e.g., Gundlach & Stack, 1990), a recent review raised the possibility that perhaps only the method changes, while the actual rate may well stay the same (Stack, 2000). Stack points to differences in methodology to explain divergent findings across studies. Exposure to televised fictional broadcasts about suicide was found to result in a greater number of suicides following the broadcast (Berman, 1989), though other studies have failed to find the same effect (Gould, Shaffer, & Kleinman, 1988; Stack, 1990).

#### *Public Attitudes and Awareness about Suicide*

In addition to the concern that exposure to warning signs for suicide might lead to increased emotional distress, a related issue involves the impact of exposure to suicide-related content on the public's attitudes

regarding the treatment and prevention of suicide. A review of the current literature demonstrates that people typically hold distinct attitudes about suicide, though these attitudes may vary from culture to culture. In a recent literature review, Cvinar (2005) found a societal perception that suicide represented a failure on the part of victims and their families to cope with emotional difficulties.

Another recent study demonstrated that the public has distinct attitudes and beliefs about the causes and prevention of suicide (Hjelmeland & Knizek, 2004). Specifically, this study showed that Norwegians typically believe that interpersonal problems are the cause of suicide and that suicide can be prevented. Hjelmeland and Knizek encouraged involving the public in suicide prevention efforts and advocated increased openness and educational training, while they dismissed concerns raised about potential iatrogenic effects.

In another study, medical students in their final year, as compared to those in their first year, were more likely to believe that suicide attempts were the result of psychiatric illness and that people who were trying to commit suicide were not responsible for their life-endangering actions (Wallin & Runeson, 2003). Interestingly, those participants with a history of suicidal ideation were less likely to believe that people with suicidal intent could be helped.

It is unclear as to what effect exposure to suicide-related content has on the public's perception of the treatment of suicide. A recent experimental study by Van Orden et al. (2006) found that participants who read warning signs for suicide reported greater abilities to recognize if someone is suicidal but did not report stronger beliefs that suicidal individuals are partly to blame, nor did they report lower likelihoods of befriending suicidal individuals. Their results also suggested that reading a list of warning signs may be effective in increasing the public's ability to recognize suicidal crises without creating or magnifying stigmatizing beliefs about suicidal individuals.

There is a need for controlled empirical investigations of the effects of exposure to warnings signs and other suicide-related content that are the foundation for suicide awareness and prevention programs. The study described above by Van Orden et al. is a start. In this study we compared the emotional impact of exposure to warning signs for suicide to exposure to warning signs for other medical conditions including heart disease and diabetes. We predicted that if exposure to warning signs for suicide indeed had a negative emotional impact, then participants exposed to warning signs for suicide would demonstrate higher scores on measures of hopelessness, depression, anxiety, and suicide ideation than would participants exposed to warning signs for a heart attack or diabetes.

## METHOD

### *Participants*

Participants were undergraduate college students who voluntarily agreed to participate in this experiment in exchange for extra credit in an introductory psychology course. The study was reviewed and approved by the Institutional Review Board. In total, 92 participants were randomly assigned to experimental conditions; however, the data from two participants were incomplete and excluded from analysis, leaving a total sample size of 90. Of these, 75 were female and 15 were male. Participant's ages ranged from 17 to 28 ( $M = 19.83$ ,  $SD = 1.78$ ). The sample was fairly diverse, including White non-Hispanic ( $n = 53$ , 57.6%), African American ( $n = 12$ , 13.0%), Hispanic ( $n = 12$ , 13.0%), Asian ( $n = 10$ , 10.9%), Asian Indian ( $n = 3$ , 3.3%), American Indian ( $n = 1$ , 1.1%), and Pacific Islander ( $n = 1$ , 1.1%). No significant differences were found between groups with respect to gender, age, years of postsecondary education, or ethnicity. A statistically significant difference in marital status was found between groups ( $\chi^2 = 4.321$ ,  $p < .05$ ); however, this result was likely due to the very low number of married participants ( $n = 3$ ).

### *Procedure*

All participants read two sets of health warning signs and completed a questionnaire packet. Upon entry to the laboratory, participants were randomly assigned to the experimental or control condition. Participants in the experimental condition first read a list of warning signs about diabetes and then the key list of warning signs about suicide. Participants in the control condition first read the list of warning signs about diabetes (the same list read by participants in the experimental condition) followed by a list of warning signs about heart attacks. In both groups, participants read and signed an informed consent form. Following exposure to the two sets of warning signs, participants completed measures of hopelessness, depression, anxiety, suicidal ideation, and health beliefs. Participants were also asked to recall all of the warning signs that they could for their experimental list (suicide or heart attack). When they had completed this task, they were then asked to recall as many warning signs for diabetes as they could and to write these down on a provided piece of paper. They were then debriefed and given contact information for a licensed psychologist and the university counseling center in the event that exposure to the warning signs had proved upsetting.

### *Materials and Measures*

*List of Suicide Warning Signs.* A list of warning signs developed by an American Association of Suicidology (AAS) working group was developed using a consensus process (Rudd et al., 2006). This list contains agreed upon warning signs for suicide (e.g., talking about suicide, threats of self-harm, and seeking means for suicide), followed by information instructing individuals about appropriate responses following the observation of such warning signs.

*List of Warning Signs for Diabetes.* A list containing warning signs for Type I and Type II diabetes was developed using information obtained from the American Diabetes Association (2005a, 2005b). Warning signs

for Type I (e.g., excessive thirst) and Type II diabetes (e.g., insulin resistance) are listed, followed by information instructing individuals about appropriate responses following observation of these warning signs (e.g., visiting the doctor or calling the American Diabetes Association at 1-800-232-3472 to ask about testing or ways to lower one's risk for Type II diabetes).

*List of Warning Signs for Heart Attack.* A list containing warning signs for heart attacks was developed using information obtained from the American Heart Association (2005). Warning signs for heart attacks are listed (e.g., shortness of breath, discomfort in the chest, lightheadedness), followed by information instructing individuals about appropriate responses following observation of these warning signs (e.g., call 9-1-1 and go immediately to the hospital).

*Positive Affect and Negative Affect Scale (PANAS).* The PANAS (Watson & Clark, 1988) was used as a global measure of positive and negative affect. The PANAS consists of 20 affect descriptors that load onto either positive or negative affect factors. Individuals are asked to rate the extent to which each descriptor describes how they feel. The 5-point rating scale ranges from *very slightly or not at all* (1) to *extremely* (5). The PANAS scales have been reported to have acceptable internal consistency, with alpha values ranging from .84 to .90 (Watson & Clark, 1988). For the current study, coefficient alpha was .85 for both the positive and negative affect subscales. In addition, the PANAS was reported to have strong convergent and discriminant validity, correlating well with measures of similar constructs and not correlating with different constructs (Watson & Clark, 1988).

*Beck Depression Inventory—Second Edition™ (BDI-II).* The BDI-II (Beck & Steer, 1987) was used to assess for signs of depression. The BDI-II is a 21-item self-report measure that asks individuals to select to what degree they experienced different symptoms of depression in the past 2 weeks. Ratings are on a 4-point scale, with a 0 indicating that they have not experienced the

symptom and 3 indicating the experience of the symptom is quite severe and prevalent. High internal reliability and validity have been reported for this instrument for a diverse group of clinical samples (Beck & Steer, 1987). For the current study, coefficient alpha was .90.

*Beck Suicide Scale (BSS).* The BSS (Beck & Steer, 1993) was used to assess for the presence of suicidal ideation and risk for suicide. The BSS consists of 21 self-report items. Participants are asked to select the response on a 3-point scale that best describes how they have felt for the past week. The BSS has been normed with both adult inpatient and outpatient samples, with preliminary evaluation for adolescent populations. Strong internal consistency has been reported ( $\alpha = .87$ ) as have moderately reliable test-retest results over a 2-week period ( $r = .54$ ) (Beck & Steer, 1993). For the current study, coefficient alpha was .90.

*Beck Hopelessness Scale (BHS).* The BHS (Beck & Steer, 1988) was used to measure participants' subjective feelings of hopelessness. The BHS is a 20-item true or false self-report measure. Individuals are asked whether each of the 20 statements accurately describes their attitude during the past week. The BHS can be scored by adding the keyed response scores, with scores ranging from 0–20 (KR-20). The reliability and validity of the BHS have been supported in the literature (Metalsky, Joiner, Hardin & Abramson, 1993). For the current study, the KR-20 estimate of reliability was .85.

*Beck Anxiety Inventory (BAI).* The BAI was used to measure the participants' experience of symptoms of anxiety. The BAI consists of 21 self-report items that describe subjective and physiological symptoms of anxiety. Individuals are asked to rate on a 4-point scale the degree to which they have been bothered by each symptom in the past week. Responses range from *Not at All* to *Severely: I could barely stand it*. High internal consistency and convergent validity have been reported for the BAI (Beck & Steer, 1990). For the current study, coefficient alpha was .89.

## RESULTS

### *Markers of Emotional Distress*

Table 1 provides the means and standard deviations for all scales across both the experimental and control group. No significant difference was found between the suicide ( $M = 36.3$ ,  $SD = 6.7$ ) and heart attack ( $M = 36.5$ ,  $SD = 5.5$ ) warning signs groups on the PANAS measure of positive affect,  $F(1,87) = .000$ ,  $p = .996$ . Similarly, no significant difference was found between the suicide ( $M = 20.3$ ,  $SD = 6.6$ ) and heart attack ( $M = 20.7$ ,  $SD = 6.2$ ) groups on the PANAS measure of negative affect,  $F(1,87) = .126$ ,  $p = .724$ . On the BAI, there was no statistically significant difference between suicide ( $M = 8.2$ ,  $SD = 7.7$ ) and heart attack ( $M = 11.4$ ,  $SD = 8.9$ ) groups,  $F(1,87) = 3.70$ ,  $p = .054$ , although a trend was observed. On the BDI, the heart attack warnings signs group ( $M = 10.2$ ,  $SD = 8.1$ ) was found to have a higher mean score than the suicide warning signs group ( $M = 6.6$ ,  $SD = 5.7$ ), although both are within normal limits and do not evidence any clinically

**TABLE 1**  
*Means, Standard Deviations for All Measures*

Instrument	Experimental Group (Suicide Warning Signs)		Control Group (Heart Attack Warning Signs)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Positive Affect (PANAS)	36.34	6.69	36.55	5.51
Negative Affect (PANAS)	20.28	6.56	20.71	6.18
BAI	8.18	7.69	11.44	8.94
BSS	.25	.90	1.17	3.27
BDI	6.58	5.66	10.25	8.11
BHS	2.56	3.21	2.38	2.81

*Note:* BAI = Beck Anxiety Inventory; BSS = Beck Scale for Suicide Ideation; BDI = Beck Depression Inventory; BHS = Beck Hopelessness Scale.

meaningful elevation,  $F(1,83) = 6.323$ ,  $p < .015$ ).

On the BSS, the heart attack warning signs group was also found to have a higher mean score ( $M = 1.17$ ,  $SD = 3.27$ ) than that of the suicide warning signs group ( $M = .25$ ,  $SD = .90$ ), but as with the BDI, the scores are well below having any clinical meaning,  $F(1,87) = 4.15$ ,  $p < .05$ . On the BHS, no significant difference in scores was found between the suicide warning signs ( $M = 2.56$ ,  $SD = 3.2$ ) and heart attack warning signs ( $M = 2.38$ ,  $SD = 2.8$ ) groups,  $F(1,88) = .041$ ,  $p = .840$ .

### *Memory*

No significant difference was found between the suicide warning signs ( $M = .58$ ,  $SD = .17$ ) and heart attack warning signs ( $M = .64$ ,  $SD = .21$ ) groups in terms of the proportion (calculated as a simple percentage) of signs that they could remember from the lists of warning signs for suicide and heart attack, respectively,  $F(1,88) = 2.58$ ,  $p = .112$ . We also looked at the percentage of each group that could remember the majority of warning signs (i.e., greater than 50%). No differences between groups were observed, with both groups demonstrating equal ability to remember the warning signs presented ( $\chi^2 = .38$ ,  $p = .54$ ).

## DISCUSSION

Several studies have empirically examined the effects of exposure to suicide prevention or awareness programs (e.g., Nelson, 1987; Orbach & Bar-Joseph, 1993; Shaffer et al., 1990). The present study attempted to empirically investigate the potential emotional impact of exposure to suicide related content—warning signs—in a controlled, experimental setting.

Results indicate that participants in the suicide warning signs groups scored lower (sometimes significantly so) on measures of emotional distress (depression, anxiety, hope-

lessness, positive and negative affect) than did participants in the heart attack warning signs group, while evidencing equal ability to recall the list of warning signs after a brief waiting period. Although a significant difference was found with those in the heart attack group reporting more anxiety and depressive symptoms, all scores were well within normal limits.

Others have raised concern about the potential iatrogenic effects of exposure to warning signs for suicide (Gould, Greenberg, Velting, & Shaffer, 2003). Although very narrow in scope, the current experimental study provides some initial evidence to counter worries that exposure to suicide warning signs could have negative emotional impact. This finding, coupled with that of Van Orden et al. (2006) suggesting positive impact on awareness and helping attitudes, offers an emerging empirical foundation for warning signs for suicide. As to the issue of the complexity of the warning signs for suicide and potential problems in memory and recall, the proportion of warning signs for suicide or heart attacks (depending on the group) did not differ, suggesting comparable ease in memory and recall, something of particular importance for public health campaigns.

### *Limitations*

Certainly the current study is narrow in scope and limited. First, although the majority of studies on the effectiveness of suicide awareness and prevention programs have focused on high school students (Nelson, 1987; Orbach & Bar-Joseph, 1993; Shaffer et al., 1990), the participants of the present study were college students. It is possible that exposure to suicide-related content will have differential effects at different ages and developmental stages. At the same time, college students serve as a convenient participant pool for well-controlled empirical studies of the effects of exposure to suicide-related content and youth in general are a target group for a large proportion of suicide prevention efforts. Second, and as noted above, this study relies exclusively on self-report. With

the exception of tests for memory, all outcome measures were self-report instruments. A study by Pearce et al. (2003) suggested that differences in self-report measures may not correspond to difference in behaviors, such as talking about one's feelings or seeking help. With respect to the memory component of the study, it can be argued that the brief exposure and recall time frames are artificial with little practical relevance. Similarly, though, it can be effectively argued that public health campaigns demand warning signs that are appropriate for brief exposure and easy to recall in order to facilitate behavioral change. Current data provide initial support for warning signs for suicide on both counts. Future studies should attempt to include both self-report instruments and observational measures of behavior. Third, longer-term follow-up after exposure to warning signs would have allowed for greater generalizability of the results.

## REFERENCES

- AMERICAN DIABETES ASSOCIATION. (2005a). *Diabetes symptoms*. Retrieved March 25, 2005, from <http://www.diabetes.org/diabetes-symptoms.jsp>.
- AMERICAN DIABETES ASSOCIATION. (2005b). *National diabetes fact sheet*. Retrieved March 25, 2005, from <http://www.diabetes.org/diabetes-statistics/national-diabetes-fact-sheet.jsp>.
- AMERICAN HEART ASSOCIATION. (2005). *Heart attack warning signs*. Retrieved March 25, 2005, from [http://www.americanheart.org/presenter.jhtml?identifier=3053#Heart\\_Attack](http://www.americanheart.org/presenter.jhtml?identifier=3053#Heart_Attack)
- BECK, A. T., & STEER, R. A. (1987). *Manual for Beck depression inventory*. San Antonio, TX: Psychological Corporation.
- BECK, A. T. & STEER, R. A. (1988). *Manual for the Beck hopelessness scale*. San Antonio, TX: Psychological Corporation.
- BECK, A. T. & STEER, R. A. (1990). *Manual for the Beck anxiety scale*. San Antonio, TX: Psychological Corporation.
- BECK, A. T. & STEER, R. A. (1993). *Manual for Beck scale for suicide ideation*. San Antonio, TX: Psychological Corporation.
- BERMAN, A. L. (1989). Mass media and youth suicide prevention. In *Alcohol, drug abuse, and mental health administration. Report of the Secretary's taskforce on youth suicide: Volume 3. Prevention and Intervention in Youth Suicide* (DHHS Publication No. ADM 89-1623). Washington, DC: U.S. Government Printing Office.
- CARTER, A. (2004). *Risk factors and warning signs of diabetes*. Newton, MA: McKesson Health Solutions.
- CVINAR, J. G. (2005). Do suicide survivors suffer social stigma? A review of the literature. *Perspectives in Psychiatric Care*, 41, 14-21.
- GOULD, M. S., GREENBERG, T., VELTING, D. M., & SHAFFER, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(4), 386-405.
- GOULD, M. S., MARROCCO, F. A., KLEINMAN, M., THOMAS, J. G., MOSTKOFF, K., COTE, J. ET AL. (2005). Evaluating iatrogenic risk of youth suicide screening programs: A randomized controlled trial. *JAMA*, 293, 1635-1643.
- GOULD, M. S., SHAFFER, D., & KLEINMAN, M. (1988). The impact of suicide in television movies: Replication and commentary. *Suicide and Life-Threatening Behavior*, 18, 90-98.
- GUNDLACH, J. H., & STACK, S. (1990). The impact of hyper media coverage on suicide: New York City, 1910-1920. *Social Science Quarterly*, 71, 619-627.
- HJELMELAND, H., & KNIZEK, B. L. (2004). The general public's views on suicide and suicide

## Conclusions

The present study explored emotional distress immediately after exposure to warning signs for suicide, along with immediate recall. No reports of increased distress were found in the suicide warning signs group compared with the heart attack warning signs group—in fact, lower levels were found for most measures. Although limited in scope and reach, the current study provides initial data to counter concerns about the possibility for undue emotional distress secondary to exposure to warning signs for suicide. Current findings also provide initial support suggesting that the warning signs for suicide identified by the AAS working group are as easy to remember as other common warning signs like those for heart attack.

- prevention, and their perception of participating in a study on attitudes towards suicide. *Archives of Suicide Research*, 8, 345–359.
- LEE, T. H. (2004). Planning pays off if a heart attack strikes. *Harvard Heart Letter*, 14(5), 1–3.
- MANDRUSIAK, M., RUDD, M. D., JOINER, T. E., BERMAN, A. L., VAN ORDEN, K., & WITTE, T. (2006). Warning signs for suicide on the internet: A descriptive study. *Suicide and Life-Threatening Behavior*, 36, 263–271.
- METALSKY, G. I., JOINER, T. E., HARDIN, T. S., & ABRAMSON, L. Y. (1993). Depressive reactions to failure in a naturalistic setting: A test of the hopelessness and self-esteem theories of depression. *Journal of Abnormal Psychology*, 102, 101–109.
- NELSON, F. L. (1987). Evaluation of a youth suicide prevention school program. *Adolescence*, 22, 813–825.
- ORBACH, I., & BAR-JOSEPH, H. (1993). The impact of a suicide prevention program for adolescents on suicidal tendencies, hopelessness, ego identity, and coping. *Suicide and Life-Threatening Behavior*, 23, 120–129.
- OVERHOLSER, J. C., HEMSTREET, A. H., SPIRITO, A., & VYSE, S. (1989). Suicide awareness programs in the schools: Effects of gender and personal experience. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28, 925–930.
- PETERSON, J. L.; NEWMAN, R. (2000). Helping to curb youth violence: The APA-MTV “warning signs” initiative. *Professional Psychology: Research & Practice*, 31, 509–514.
- PHILLIPS, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review*, 39(3), 340–354.
- RUDD, M. D. (2003). Warning signs for suicide. *Suicide & Life-Threatening Behavior*, 33, 99–100.
- RUDD, M. D., BERMAN, L., JOINER, T. & MANDRUSIAK, M. (2006). Warning signs for suicide: Theory, research, and clinical application. *Suicide and Life-Threatening Behavior*, 36, 255–262.
- SHAFFER, D., VIELAND, V., GARLAND, A., ROJAS, M., UNDERWOOD, M., & BUSNER, G. (1990). Adolescent suicide attempters: Response to suicide-prevention programs. *JAMA*, 264, 3151–3155.
- STACK, S. (1990). The impact of fictional television films on teenage. *Social Science Quarterly*, 71, 391–399.
- Survey shows Americans ignore key warning signs for diabetes. (1998, November 12) *New York Amsterdam News*, p. 15.
- VAN ORDEN, K. A., JOINER, JR., T. E., HOLLAR, D., RUDD, M. D., MANDRUSIAK, M., & SILVERMAN, M. M. (2006). A test of the effectiveness of a list of suicide warning signs for the public. *Suicide and Life-Threatening Behavior*, 36, 272–287.
- VIELAND, V., WHITTLE, B., GARLAND, A., HICKS, R., & SHAFFER, D. (1991). The impact of curriculum-based suicide prevention programs for teenagers: An 18-month follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 811–815.
- WALLIN, U., & RUNESON, B. (2003). Attitudes towards suicide and suicidal patients among medical students. *European Psychiatry*, 18, 329–333.
- WATSON, D., CLARK, L. A., & TELLEGAN, A. (1988). Development and validation of brief measure of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.

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