

Evaluating the Effectiveness in Initiating Help-Seeking Behaviors by Exposure to an Adult Male Public Service Announcement

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ABSTRACT

Numerous studies have demonstrated that PSA campaigns can be effective in increasing awareness/knowledge, attitudes, intentions to change behaviors, and ultimately behaviors; and the majority of suicide prevention PSAs encourage help-seeking behavior by the person at-risk and/or by those worried about a person who might be at risk of suicide. However, to date, only a handful of studies have evaluated the impact of suicide prevention [PSA] campaigns and no suicide prevention PSA campaign has examined whether behavior change occurs in response to short-term implementation of a suicide prevention PSA. The primary goal of this study is to determine whether exposure to short-term (1 month) suicide prevention PSA campaign results in a help-seeking behavior. Results offer initial, limited evidence that public awareness campaigns are effective at getting an audience to engage in a help-seeking behavior, however due to methodological limitations, the superiority of a PSA vs. a printed flyer was not able to be determined.

KEYWORDS

Media; public awareness campaigns; suicide prevention

INTRODUCTION

Suicide is a serious public health problem internationally (World Health Organization, 2014), in the United States (USDHHS, 2012), and in the State of Minnesota where the rate of suicide in 2017 was 56% higher than it was in the year 2000 and the number of suicides by males in 2017 was 8% above that of 2016 (<https://webappa.cdc.gov/cgi-bin/broker.exe>).

The burden of suicide is defined by sub-groups of the population that contain the greatest number of individuals who die by suicide. The 2012 National Strategy for Suicide Prevention specifies that “communication efforts should target defined audiences or segments of the population, such as groups with higher suicide risk” (USDHHS, 2012). By defining these sub-groups, prevention efforts targeted specifically to them have the potential to save the greatest number of lives. One such sub-group in the State of Minnesota is that of males between the ages of 18 and 54 who in 2017 comprised 30% of all Minnesota’s deaths by suicide.

Knowledge of how best to prevent suicide is still accumulating, but increasing help-seeking and referrals and treatment engagement for at-risk individuals is one of the aspirational goals defined by organizations, groups, and individuals affected by and/or

working to prevent suicide. In addition, it has been shown to be associated with lower risk of suicide (Gould et al., 2004; National Action Alliance for Suicide Prevention: Research Prioritization Task Force, 2014). There is an extensive body of research that has documented that males are far less likely than females to seek help for psychological problems (Addis & Mahalik, 2003; Berman, 2006; Judd, Komiti, & Jackson, 2008).

Public education campaigns dealing with other public health problems such as tobacco smoking and obesity have been shown to be effective in changing attitudes and behaviors (Ajzen, 2012; Jordan, Piotrowski, Bleakley, & Mallya, 2012; Wakefield et al., 2013; Wakefield, Loken, & Hornik, 2010) and symptom recognition (Gordon, Bell, & Ranta, 2019). Similar by modality to this study, but not specific to suicide prevention, was a study that evaluated the impact of PSAs and brochures upon general public drivers interfacing with emergency service vehicles. The authors found that “The viewing or reading of information suggesting a driver move over and slow down when an encountering emergency vehicle on the highway will result in more responsive actions by the vehicle operator (Jenaway, Austin, Troup & Basch, 2012, p. 5).

A similar suicide prevention approach is media-based public education campaigns, most commonly in the form of public service announcements (PSAs). The majority of suicide prevention PSAs encourage help-seeking behavior by the person at-risk and/or by those worried about a person who might be at risk of suicide (Ftanou, Cox, Nicholas, Spittal, Machlin, & Robinson, 2017). Accordingly, Objective 2.1 of the U. S. National Strategy for Suicide Prevention is to “Develop, implement, and evaluate communication efforts designed to reach defined segments of the population” (USDHHS, 2012); and Objective 1.2 of the Minnesota State Suicide Prevention Plan is to “Promote and distribute existing safe messaging PSAs and media campaigns related to suicide and mental illness/health promotion” (<http://www.health.state.mn.us/injury/pub/SuicidePreventionStatePlan2015.pdf>). However, to date, “only a handful of studies have evaluated the impact of suicide prevention [PSA] campaigns” (Ftanou et al., 2017; Song et al., 2017). These have demonstrated that suicide prevention campaigns can increase the number of calls to helplines (Jenner, Jenner, Matthews-Sterling, Butts, & Williams, 2010; Oliver et al., 2008) and decrease in the number of suicides in subsequent months (Matsubayashi, Ueda, & Sawada, 2014). Klimes-Dougan and colleagues (Klimes-Dougan & Lee, 2010; Klimes-Dougan, Yuan, Lee, & Hourri, 2009) observed greater improvements in knowledge and help-seeking behaviors from televised PSAs compared to billboard advertisements. However, no suicide prevention PSA campaign has examined whether behavior change occurs in response to a short-term implementation of a suicide prevention PSA.

AIM

The primary goal of this study is to determine whether exposure to a short-term (1 month) suicide prevention PSA campaign results in initiating behaviors pursuant to help-seeking. A secondary goal of this study was to compare results of this PSA campaign with those from a one-off presentation of a suicide prevention flyer encouraging the same initiating behaviors.

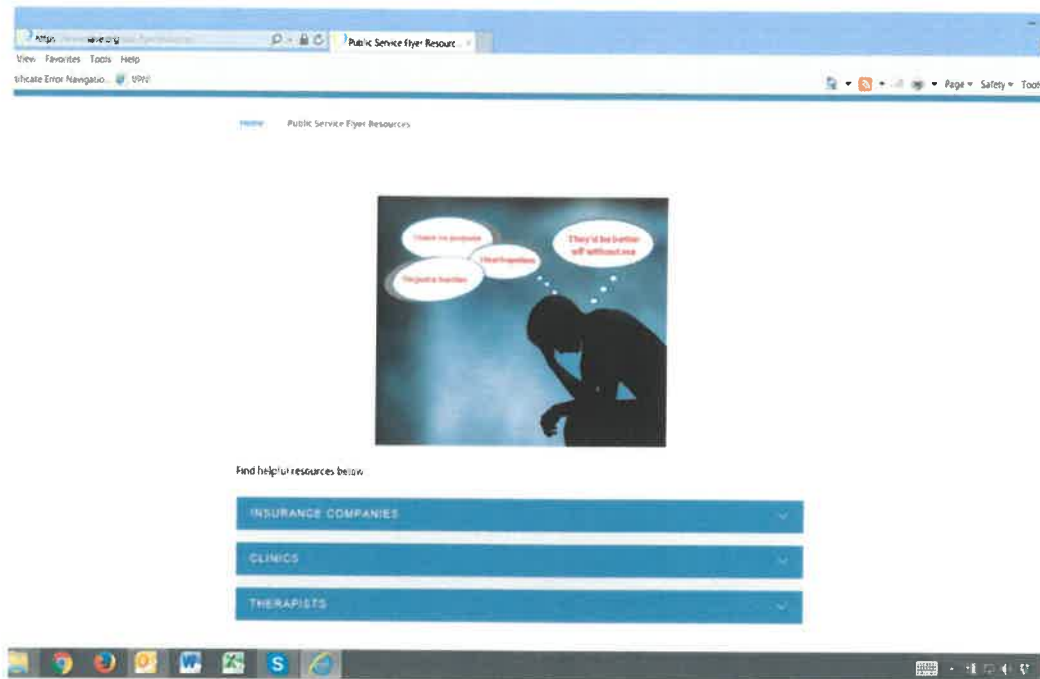


Figure 1. Screen shot of dedicated SAVE web page.

METHOD: PSA

A 30 second PSA was created depicting an adult male within the age range of the intended targeted viewers engaging in everyday scenes of life (e.g., brushing his teeth, getting milk out of the refrigerator), while thinking dysfunctional cognitions associated with suicide, such as “I feel hopeless,” “I have no purpose,” “I’m such a burden”, or “They’d be better off without me.” Dysfunctional cognitions such as these are targets for change through cognitive behavior therapy (Ellis, 2006), an evidence-based treatment for suicidal persons. The video’s tag line poses, “If these are your thoughts” and directs the viewer to click a sub-menu button to be redirected to a dedicated SAVE web page on which (see screen shot below) follow-up advice was offered on how to reframe these cognitions (again commensurate with cognitive behavioral treatment approaches) and further sub-menu buttons were provided if access to local resources (insurance companies, mental health clinics, and therapists) was desired. This approach is consistent, again, with what is directed by the National Strategy for Suicide Prevention (USDHHS, 2012) that states, “efforts promoting behavior change should convey a clear call to action and provide specific information the audience needs to act” (Figure 1).

PSA Study Participants

The PSA was posted to male Facebook subscribers, aged 18–54, within the catchment area of Hennepin and Ramsey Counties, Minnesota over a 30 day period during the month of March, 2017. The total potential population of viewers was 760,000.

Method: Flyer

Five thousand one-page flyers similarly addressing dysfunctional cognitions associated with heightened suicide risk and directing recipients to a dedicated SAVE web page, distinct from the one to which the PSA viewers were directed, but with the same corrective information and referral sub-menu as were created for the PSA website.

Flyer Study Participants

All 5,000 flyers were distributed to members of the Minnesota National Guard at drill meetings held within the same catchment area during the month of March, 2017. Attending National Guardsmen were of similar age (18–54) to the target audience of the PSA.

Measures

Data analytics reflecting the impressions, reach, number and duration of website visits per each method of outreach (PSA and flyer) were collected through Google analytics for each of the dedicated websites. To calculate average session duration, Google Analytics uses the duration of each session for the date range specified and divides that sum by the total number of sessions. These analytics provided data on impressions (the number of times the PSA was viewed), reach (the number of people who viewed the PSA at least once and the number of National Guardsmen who were personally handed a flyer), and click-through rates (the proportion of individuals who sought out dedicated web pages after either viewing the PSA or receiving the flyer). A click-through rate is a commonly used measure of the effectiveness of an advertising or email campaign (https://en.wikipedia.org/wiki/Click-through_rate).

Statistical Analyses

The relative reach of the PSA was compared to that of the flyer by a Chi Square test with Yates Correction. The percentage of impressions was similarly calculated, but as this was not the primary outcome the authors deleted that percentage from the table in order not to confuse the reader.

IRB Approval

Approval for the study was granted by the Minnesota Department of Health Institutional Review Board (IRB).

RESULTS

Table 1 below presents results of this study derived from both Facebook and Google Analytics. The PSA was viewed 261,178 times by 105,831 individuals or 14% of the targeted population. 1.6% of at least one-time viewers clicked through to the dedicated web page for an average stay of more than 2 1/2 minutes. 1.4% of these individuals (and

TABLE 1. SAVE PSA vs. Flyer Impact Data.

Data Analytics	PSA N (%)	Flyer N (%)
Total Potential Population ¹	760,000	11,250
Impressions ²	261,178 (37%)	N/A
Reach ³	105,831 (14%)	5,000 (44%)
Outcome #1 ⁴ (*)	Facebook Data 0.83% for health care ads	Google Data 1738 individuals (1.6% of reach) made 1,815 views
Outcome #1: Avg. Time Spent in Min.	2:38	3:56
Outcome #2 ⁵ (**)		
Outcome #2: Avg. Time Spent in Min.	2:34	2:55

(*) CTR for Reach Comparisons: $\chi^2 = 32,3779$, $df = 1$, $p < 0.001$; (**) $\chi^2 = 216.4738$, $df = 1$, $p < 0.001$.

1.7% of all views) further clicked to a secondary page for a referral, staying on this sub-menu also for 2 1/2 minutes.

The flyer produced 30 hits to the dedicated web page from 0.6% of those who received the flyer. This proportion was roughly one-third that of those resulting from the PSA, a significant difference. However, flyer recipients stayed on the dedicated web page more than a minute longer than PSA viewers and almost one-half of these individuals (43%) further clicked to a secondary referrals web page, also a significant difference compared to PSA viewers, staying there an average of almost 3 minutes.

DISCUSSION

As noted above, the primary goal of this study (Outcome #1) was to determine whether exposure to a short-term (1 month) suicide prevention PSA campaign would result in effecting initiating behaviors toward help-seeking, as measured by click-through rates (CTR). In this regard, 1.6% of individuals viewing the PSA clicked through to the primary dedicated web page offering corrective cognitions. These results are slightly better than expected given comparable analytics of audience engagement and CTRs. For example, Facebook healthcare ads have a slightly lower CTR of 0.83% (<http://www.smartinsights.com/internet-advertising/internet-advertising-analytics/display-advertising-clickthrough-rates/>). In comparison to the flyer, the PSA's CTR was almost three times greater; however, recipients of the flyer stayed on their dedicated web page more than a minute and a quarter longer. It is possible that flyer recipients showed greater interest in the material on this 1st web page given that PSA viewers had already seen 30 seconds of visual information via the PSA, hence making this 1st page of web-based information more visually engaging for them. With regard to Outcome #2, CTRs to the 2nd dedicated webpage, 1.4% of individuals who viewed the PSA and clicked-through to the 1st web page sought further information about referrals in the metropolitan Minneapolis-St. Paul area. However, the proportion of individuals who received the flyer and then had clicked-through to the 1st

dedicated web page was considerably greater (43%). This result may be an artifact, given that even a single click-through to the second web page by a flyer recipient who had viewed the 1st web page would have resulted in a CTR of 3.3%, given the small size of the denominator ($N = 30$). Alternatively, and more probably, flyer recipients were National Guardsmen who, as a sub-population, have a very high suicide rate (https://www.pdhealth.mil/sites/default/files/images/docs/TAB_B_DoDSER_CY_2017_Annual_Report_508_071619.pdf), hence those Guardsmen who clicked-through twice may well have been that much more intent on receiving referral information for evaluation and treatment.

Click through rates are critical to online behaviors and specifically for advertising. The question in this study to measure was very narrow: would exposure to a PSA result in an action or behavior, and in this case that behavior was to click through on a website. While other industries study click through behaviors (e.g., advertising), we believed this to be a novel approach to assessing the value and/or usefulness of a PSA campaign for suicide prevention.

It is reasonable to conclude that both the suicide prevention PSA and the flyer were successful in effecting desired follow-up behaviors to seek cognitive reframing information and, for those more in need, to seek referrals for help. Surprisingly, the results suggested that a printed flyer had a greater impact than a video PSA on the audience engaging in a help-seeking behavior.

Creating and disseminating effective public awareness/messaging on the topic of suicide prevention is complicated, difficult, and costly; moreover, it must be done right to reduce the risk of harm (cf., Klimes-Dougan et al., 2016). As these authors note, many public awareness campaigns lack an empirical base and have not been rigorously studied. The effort in the present study was to ground the public awareness messaging in evidence-based research and to provide data on its impact.

LIMITATIONS

There are several limitations to this study. Given privacy considerations, this study made no attempt to discern or measure the relative suicide risk of those engaging in follow-up (click-through) behavior, although one possible hypothesis is that those who did go to each of the dedicated webpages had one or more of the PSA-reflected cognitions and felt there would be of some value in gaining more information and/or referral information, as suggested by the PSA that they would; and, as noted above, those receiving the flyer may well have had greater suicide risk. Conversely, if a PSA viewer was not having any of the PSA-reflected cognitions, there would be less compelling reasons to click through to the dedicated webpages. Hence, we may reasonably, albeit tentatively, conclude that both the PSA and the flyer were effective in reaching a target audience of individuals holding dysfunctional cognitions associated with elevated risk for suicide and sufficiently engaging them to take an initial step toward seeking help.

It is possible that those members of the National Guard who received the flyer also were exposed to the PSA, but 78.7% of these Guardsmen attending these weekend drills lived outside the catchment area where the PSA was posted on Facebook (Michael Wickman, personal communication, January 28, 2020), hence only a small proportion of Guardsmen would have a window of exposure to the PSA only during the weekend drill, affording them little to no opportunity to access their Facebook pages.

As those who viewed the PSA were already on line and on Facebook, the initial comparison to flyer recipients may be spurious in that less was required of these PSA viewers to engage an initial click-through than what was required of flyer recipients who had to take an extra step to go on line.

This is a small study in a limited geographic area, hence the generalizability of its findings awaits further study. Moreover, as no baseline data was recorded, no claim can be made about the effectiveness of the PSA campaign in increasing initiating help-seeking behaviors.

Another limitation was the inadvertent and/or accidental landing on the website page created for the study. In this particular study while the organization's main website and URL were in existence, the specific pages created for this study were not available and/or accessible through the website or organization's URL. There was no way for anyone to obtain the URL from the video as that was a click through on Facebook. The only other way we acknowledge as a small but real risk was someone could have gained access to the URL and page for the flyer was if a flyer was left in the briefing room or elsewhere, picked up by another person and that person entered the URL on their telephone or computer. We created two separate URLs for the purposes of the study, one for the video and one for the flyer that only through exposure to one of those would it be possible to gain access to those pages. Therefore, the only way to have known those URLs was through exposure of the video, the flyer, or someone connected to the study. We also acknowledge someone could have broken/hacked into the organization's website and been able to search the site map and see the hidden pages/URLs for those pages relative to this study, but to our knowledge no such break occurred. We know of no other way that someone could have randomly accessed those pages as they were not accessible through any part of the website (other than having the URL on the flyer). Thus while we do not have a way to formally estimate how many could have accessed the pages randomly, we acknowledge that it could have occurred and if so would have been a very low occurrence rate.

CONCLUSIONS

Results from this study offer initial evidence of the effective reach of a suicide prevention PSA and a printed public service message in reaching a targeted audience and effecting behaviors among those reached. Further research is needed to discriminate whether those responding with hoped for behaviors (click-through behaviors) are those more in need (i.e., are at greater risk than those who don't click through), whether PSAs differentially appeal to those at low versus high risk for suicide, and/or whether the immediate outcome (click through behavior) is tied to desired longer-term behaviors (seeking and receiving help after receiving referrals for help).

AUTHOR NOTES

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