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ORIGINAL ARTICLE

Rates of exposure to natural, accidental, and suicide deaths

Michael R. Nadorff PhD^{1,2}  | Hilary L. DeShong PhD¹ | Shea Golding PhD^{1,3} | Julie Cerel PhD⁴  | Chandler J. McDaniel BS¹ | Ashley R. Pate BS¹  | Karen Kelley BS¹ | Maggie D. Walgren BS^{4,5}

¹Mississippi State University, Starkville, MS, USA

²Baylor College of Medicine, Houston, TX, USA

³Spectrum Health, Grand Rapids, MI, USA

⁴University of Kentucky, Lexington, KY, USA

⁵Oklahoma State University, Stillwater, OK, USA

Correspondence

Michael R. Nadorff, Mississippi State University, Starkville, MS, USA.
Email: mnadorff@psychology.msstate.edu

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Abstract

Objective: We expand upon previous research examining the prevalence of exposure to suicide deaths by comparing these to natural and accidental deaths. Furthermore, we examine whether participants are more apt to lie about the cause of death for a suicide than for an accidental or natural death.

Method: The sample consisted of 1,430 respondents who were recruited via Amazon's Mechanical Turk to complete an online study. Participants completed measures to assess exposure to death, causes of death, and willingness to disclose the cause of death to others.

Results: Nearly all respondents (94.5%) had been exposed to a natural death, and most of our sample (63.2%) reported exposure to a suicide death. Among those affected by all three causes of death, RANOVA analysis also indicated that people lied about cause of suicide death to significantly more people than accidental or natural.

Conclusions: Overall, the current study presents updated prevalence rates of exposure to various types of death and replicates previous findings of a decrease in willingness to disclose suicides when compared with other causes of death.

KEYWORDS

accidental death exposure, natural death exposure, suicide exposure

INTRODUCTION

Accounting for 48,344 deaths in 2018, suicide was the 10th leading cause of death in the United States (Drapeau & McIntosh, 2020). In fact, the annual suicide rate for the United States has increased annually since 2005. Given these increasing rates, it is also likely that more individuals are being exposed to and affected by losing friends and family to suicide. In fact, research has demonstrated that half the population knows someone who has died by suicide, with each suicide leaving behind approximately 135 people (Cerel et al., 2016, 2019; Feigelman et al., 2018). Furthermore, compared to other causes of death, loss to suicide appears to encompass characteristics of grief and bereavement

that are either specific to suicide or not as common in other forms of loss (Jordan & McIntosh, 2011; McIntosh, 1993). For instance, in a study conducted by Barrett and Scott (1990), survivors of deceased spouses were interviewed. Compared to both expected and unexpected natural deaths, responses of suicide survivors indicated significantly higher levels of shame and stigmatization. Suicide survivors also reported higher levels of searching for explanation and feelings of responsibility for the death compared to the expected natural death survivors (Barrett & Scott, 1990). This suggests that, in addition to experiencing grief reactions common in other types of death, suicide survivors also experience grief reactions unique to suicide loss. Given this, in addition to the climbing rates of suicide over the

past three decades, it is important to be aware of the rates of individuals who have lost someone due to suicide.

Over the last three decades, there has been a great deal of research in grief, but far fewer examining types of survivorship. In fact, even things as basic as the rates of exposure to natural and accidental deaths are unknown. The present study is twofold. First, in the present study, we expand upon previous research examining the prevalence of exposure to suicide deaths by including rates of both natural deaths and unexpected, accidental deaths. Additionally, given the stigma reported by survivors of suicide (Barrett & Scott, 1990), disclosing the cause of death to others carries potential discomfort not associated with other types of death. Previous research indicates that individuals who have lost someone to suicide have lied about the cause of death at higher rates than others with accidental, expected natural, or unexpected natural deaths (Range & Calhoun, 1990). Given this, our second purpose was to assess willingness to disclose cause of death and compare suicide to natural and unexpected deaths. Therefore, it was hypothesized that our study would replicate previous findings with individuals of suicide loss reporting less willingness to disclose cause of death than for other causes of death.

METHOD

Participants and procedure

The sample consisted of 1,430 respondents (50% male, 49% female, 0.3% transgender, 0.07% non-binary, and 0.3% not responding), who were recruited via Amazon.com's Mechanical Turk (mTurk), an online forum on which individuals can participate in online research opportunities for nominal payments. The participants' ages ranged from 18 to 78, with an average age of 33.53 ($SD = 10.84$). The racial composition of the sample is Caucasian (79.5%), Asian (8.0%), African American (6.8%), Multiracial (2.7%), Native Hawaiian or other Pacific Islander (2.6%), and American Indian or Alaskan Native (0.4%).

Potential participants read a description of the study and the approximate amount of time to complete the study on mTurk. If mTurk workers chose to be involved in the study, they were directed to follow a hyperlink to the present study constructed in Qualtrics. Upon providing electronic informed consent, participants were asked to provide answers to a demographic questionnaire followed by measures assessing questions about exposure to suicide, accidental, and natural death in addition to other measures that were part of a larger study. After the questionnaires were completed, participants received a debriefing form providing additional details about the study, including resources such as suicide prevention hotlines. They were provided \$1.00 compensation for their participation in the study, which took approximately 30 minutes.

Materials

Death and decedent information

To identify whether participants had experienced each type of death, the participants were asked "How many people have you known who have died by (cause of death)" with the causes of death being "suicide," "unexpected accident (e.g., death resulting from a motor vehicle crash, work injury, sports injury, etc.)," and "natural deaths" These questions have strong face validity and are similar to the items used in prior research, for example, "Do you know anyone who has died by suicide" (Cerel et al., 2016, pg. 102).

Cause of death disclosure and reaction measure (CDDR)

This measure was modified from the Family Quality Reaction Scale (FQRS), which was developed to investigate reactions to disclosures of self-harm (Frey et al., 2015). The FQRS yielded acceptable internal reliability in prior research with Cronbach's alpha of 0.87 (Frey et al., 2015). For the present study, we utilized the items "To how many people have you disclosed the true cause of death of the person who died by (cause of death)" to assess disclosure and "To how many people have you lied about the true cause of the death of the person who died by (cause of death)?" to assess lying about the death.

Statistical analyses

Descriptive statistics are provided on the overall sample, providing information on the rates of exposure to the three different types of death. To test our study hypothesis, responses from the 618 participants affected by all three types of death were compared using repeated measures ANOVAs (RANOVA). We attempted to also examine those who just reported a single cause of death exposure to conduct a between subjects comparison, but the cell sizes for suicide and accidental single-exposure deaths were too low properly power this specific analysis. Therefore, the results below only present the RANOVA analysis.

RESULTS

Frequencies of prevalence rates of individuals exposed to accidental deaths, natural deaths, and suicide deaths are provided in Table 1. Nearly all respondents had been exposed to a natural death, though exposure to suicide and accidental deaths were also quite prevalent. Looking at the different

types of death, 19.2% reported only being exposed to one type of death, 35.8% two types of death, and 43.2% all three types of death.

Disclosure of cause of death

We examined differences in those who have experienced all three types of death ($N = 618$). RANOVA analysis suggested a main effect of death type, $F(2, 616) = 10.11, p < .00, \eta_p^2 = .016$, suggesting that there were differences in willingness to disclose the cause of death across death types. Post hoc analyses using repeated measures t-tests demonstrated that participants lied about the cause of death for suicides significantly more than they did for accidental ($t(617) = -4.41, p < .01$) or natural deaths, ($t(617) = -2.69, p < .01$). There was no significant difference between natural and accidental deaths ($t(617) = 1.16, p = .12$).

DISCUSSION

The goal of the current study was to determine the rates of exposure to three broad types of death and to investigate whether the likelihood to disclose a false cause of death was more prevalent for suicide deaths. Given the dearth of prevalence data for exposure following accidental or natural deaths, our study contributes to extant literature by providing prevalence estimates for these types of death. Rates for exposure to accidental and suicide deaths are nearly identical with participants reporting exposure at 62.8% and 63.2%, respectively. Furthermore, the current study yielded fairly consistent findings related to lying about the cause of death, consistent with Range and Calhoun (1990). Among those who experienced a single loss and those who experienced

multiple losses, participants reported lying about the cause of death more for suicide deaths. Thus, our hypothesis was supported.

Limitations and future directions

First, though the sample has an adequate split of males and females, there is a significant majority of Caucasian respondents. However, this is to be expected given that the study consisted of participants in the United States, where Caucasian is the most common ethnicity. However, the study may not generalize to other ethnic groups. Second, one of the greatest challenges of this research is the tremendous amount of overlap for individuals experiencing these three causes of death. For instance, an individual who has lost someone to suicide and then loses someone to accidental death cannot be categorized solely as an “accidental death survivor,” as they retain the initial experience. We attempted to address this limitation by collecting a large sample, but even so, the prevalence of single-affected individuals for accidental and suicide deaths was very low, precluding us from conducting the analyses. Further, even if our sample had been large enough, the low prevalence may have resulted in biased results. As such, we believed the most accurate way to examine these questions were within individuals. Third, although based upon the literature, our measures were not independently validated. However, they were either close to questions used previously, or they were part of established measures, and they were face valid. Lastly, expected natural deaths were not differentiated from unexpected natural deaths in the present study, which may have obscured possible response differences. The present study, however, yielded prevalence rates for exposure following suicide death, accidental death, and natural death, which will benefit future research in this area.

Overall, the current study lays the groundwork for future research examining those who are affected by different causes of death, as well as interventions for bereaved individuals. Future longitudinal studies utilizing more diverse samples are especially needed, as they will capture responses to various types of death as they happen, and better disentangle responses to different types of losses, greatly enhancing the current literature.

CONCLUSIONS

Although death is universal, in many ways the research on its effects on us, and how those effects differ based upon the type of death, is truly in its infancy. This is particularly true in relation to suicide deaths, as we only recently learned how many individuals are actually affected by each suicide (Cerel et al., 2019). The present study adds to this literature by being

TABLE 1 Number exposed per death type

Type of death	Natural	Suicide	Accidental
Single exposed	246	19	10
Triple exposed	618	618	618
Suicide natural exposed	242	242	
Suicide accidental exposed		25	25
Natural accidental exposed	245		245
Percent of overall sample exposed	94.5%	63.2%	62.8%

Notes:: Single Exposed (n exposed to only one type of death), Triple Exposed (n exposed to all types of death), Suicide Natural Exposed (n exposed to suicide and natural deaths only), and Suicide Accidental Affected (n exposed to suicide and accidental deaths only). There were 23 individuals who reported not being exposed to any form of death.

the first to provide an estimate of the percentage of individuals exposed to accidental deaths, showing it to be similar to the rate of exposure to suicide. Further, it demonstrates that individuals are more likely to lie about the cause of death in relation to a suicide than other causes of death. This supports the assertion that suicide death exposure impacts individuals differently than other causes of death. Thus, further research is needed to examine potential impacts of death and resulting individualized treatments for grief.

ORCID

Michael R. Nadorff  <https://orcid.org/0000-0002-8107-7514>

Julie Cerel  <https://orcid.org/0000-0002-4534-5526>

Ashley R. Pate  <https://orcid.org/0000-0003-4917-4039>

REFERENCES

- Barrett, T. W., & Scott, T. B. (1990). Suicide bereavement and recovery patterns compared with nonsuicide bereavement patterns. *Suicide and Life-Threatening Behavior, 20*(1), 1–15.
- Cerel, J., Brown, M. M., Maple, M., Singleton, M., van de Venne, J., Moore, M., & Flaherty, C. (2019). How Many People Are Exposed to Suicide? Not Six. *Suicide and Life-Threatening Behavior, 49*(2), 529–534. <https://doi.org/10.1111/sltb.12450>.
- Cerel, J., Maple, M., van de Venne, J., Moore, M., Flaherty, C., & Brown, M. (2016). Exposure to suicide in the community: Prevalence and correlates in one U.S. state. *Public Health Reports, 131*(1), 100–107. <https://doi.org/10.1177/003335491613100116>.
- Drapeau, C. W., & McIntosh, J. L. (2020). "U.S.A. suicide 2018: Official final data." Retrieved March 2, 2020, from <http://www.suicidology.org>.
- Feigelman, W., Cerel, J., McIntosh, J., Brent, D., & Gutin, N. (2018). Suicide exposures and bereavement among American adults: Evidence from the 2016 General Social Survey. *Journal of Affective Disorders, 227*, 1–6. <https://doi.org/10.1016/j.jad.2017.09.056>.
- Frey, L. M., Hans, J. D., & Cerel, J. (2016). Suicide Disclosure in Suicide Attempt Survivors: Does Family Reaction Moderate or Mediate Disclosure's Effect on Depression? *Suicide and Life-Threatening Behavior, 46*(1), 96–105. <https://doi.org/10.1111/sltb.12175>.
- Jordan, J. R., & McIntosh, J. L. (2011). *Grief after suicide: Understanding the consequences and caring for the survivors*. Routledge/Taylor & Francis Group.
- McIntosh, J. L. (1993). Control group studies of suicide survivors: A review and critique. *Suicide and Life-Threatening Behavior, 23*(2), 146–161.
- Range, L. M., & Calhoun, L. G. (1990). Responses following suicide and other types of death: The perspective of the bereaved. *Omega: Journal of Death and Dying, 21*(4), 311–320.

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