Temporality of suicide
'TWAS IT THE SEASON?

By Chris Caulkins, MPH, MA, ABD

It is the winter holiday season and I open an e-mail from a local fire department inviting me to present on the important topic of suicide prevention. The message begins with an announcement that it 'tis the season for suicides. While the sentiment is certainly one of concern, it is actually a myth perpetuated by well-meaning people. It seems intuitive that those who are misplaced during the holiday season are dying by their own hand in droves, but in reality, this is simply not true. If we are going to prepare for, respond to, and hopefully prevent suicides, it is important for us to understand the true temporable variabilities of suicidal behavior. In this article I will discuss several common myths in regard to the temporality of suicide and suicidal behavior, including the effects of the lunar cycle, season, day of the week, and length of daylight.

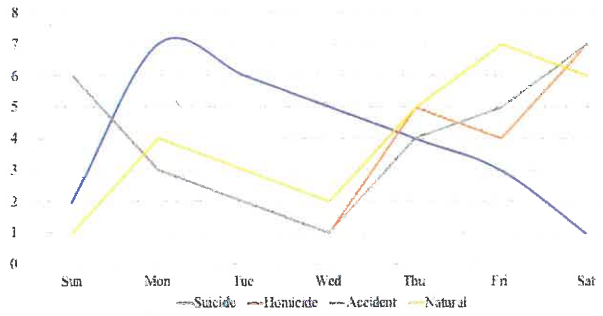
Lunar Cycle

Many among us still believe the notion that behavioral emergencies are caused by the moon, hence the origin of the word lunacy (LaMothe, 2007; Leigh, 2014). You do not have to be in emergency medical services long to encounter water cooler talk reinforcing this false belief. The moon, in fact, has no statistical effect on call volumes or patient's behavior (Bledsoe, 2018; Maldonado & Kraus, 1991; Snelson, 2004). So why do some responders swear the moon dictates behavior? The answer lies in something called confirmation bias, a situation in which people tend to fall back on a favored belief to affirm what they are observing is true (Klayman, 1995). Because there is no preconceived notion that lack of moonlight causes behavioral disturbances, the responder does not typically attribute a patient's erratic behavior to lack of lunar visibility.

Day of the Week

As far back as the end of the 19th century it was noted that suicide rates were lowest on Fridays, Saturdays, and Sundays (Durkheim 1887/1951). Researchers studying a 58-year period in the U.S. discovered suicide most frequently occurred on Mondays (Maldonado & Kraus, 1991) with later researchers confirming a 6-10% increase of suicides on Mondays (Miller, Furr-Holden, Lawrence, & Weiss, 2012). In my analysis of death manners in Minnesota from 2001-2016, I have found the same patterns of suicide with Monday being the peak day and the weekend being the low (see Figure 1). On an interesting side note, natural deaths peak on Fridays with accidents and homicides peaking on Saturdays (see Figure 1).

Figure 1. Manner of death by day of week. Minnesota 2001-2016.



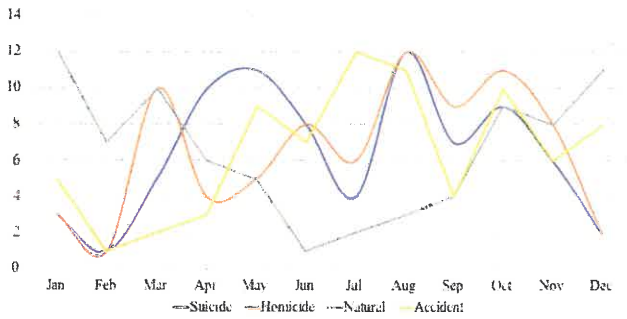
Note. Numbers to left of graph are a standardized level, not actual numbers of deaths.

Month

A research review of 27 studies by Galvão, Silva, & Silva (2018) revealed that the majority of suicides occur between spring and early summer regardless of the hemisphere—north or south—they occurred within. This hemispheric difference means that suicide rates are liekly tied to the season itself rather than the holiday season. In the U.S., suicides peak from April to May with a second peak in September (Bridges, Yip, & Yang, 2005). My analysis of

the 2001-2016 reveals a similar pattern with suicides climbing during the month of May, June, August, and October while dropping to their lowest points in February and December (see Figure 2). So contrary to popular belief, the winter holidays are not peak suicide times. Interestingly, Sansone and Sansone (2011) have outlined what they non-secularly refer to as the Christmas Effect when instances of self-harm, psychiatric hospital admissions, and suicide attempts decrease while mood disorders and alcohol-related poisonings increase.

Figure 2. Manner of death by month. Minnesota 2001-2016.



Note. Numbers to left of graph are a standardized level, not actual numbers of deaths.

Daylight

Roehner (2015) found that length of daylight—of lack thereof—associated with latitude does not have an effect on suicide rates, although it does result in exacerbation of seasonal affective disorder. The findings of my analysis of Minnesota data corroborates Roehner's assertion as suicides are not tied to hours of daylight (see Figure 2).

Conclusion

The beliefs that suicide and suicidal behavior increases during the holiday season is unfounded. If anything, the holidays are a time of the year suicides decrease—perhaps because of increased social connection and good will towards others. This, of course, does not mean we should drop our vigilance in looking for the signs of suicide risk as it can and does happen throughout the entire year. We would, however, do well to intensify suicide prevention programs and messaging during our peak times of the year. Taking the peak day of the week—Monday—into account, we should avoid making the mistake of waiting until the weekend is over to seek help for ourselves, our patients, or those close to us when suicidal crises or thoughts arise.

Chris is the executive director of the Strub Caulkins Center for Suicide Research (SCCSR) and has researched, presented, and published on suicide at a state, national, and international level. Chris may be contacted at c.caulkins@suicideresearch.org. You may follow the SCCSR on Facebook at https://www.facebook.com/StrubCaulkins or visit us on the web at www.suicideresearch.org.

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