

CLEARINGHOUSE FOR MILITARY FAMILY READINESS

Army Personnel & Suicide: Research Questions

Clearinghouse Technical Assistance Team

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Introduction

The Technical Assistance team at the Clearinghouse for Military Family Readiness at Penn State received a request from the Integrated Prevention Advisory Group at Ft. Moore, Georgia, regarding a set of specific questions concerning United States Army personnel and suicide. Each question is provided in a list below, is followed by the answer written in a “bottom line up front” format and includes supporting narrative and references. Research information that examines the topics of interest was identified by searching peer-reviewed journal articles and government reports. An emphasis was placed on highly cited research, and research published in the last 20 years. Search queries included the terminology from the research questions listed below. Search platforms included ProQuest, Frontiers, Google Scholar, PubMed, Consensus Artificial Intelligence (AI), and a general Google web search.

This review provides a rapid, preliminary examination of the research. It is not intended to serve as a comprehensive review of the literature. The resources provided are not endorsed by the Clearinghouse for Military Family Readiness at Penn State. The information about the resources is provided to help professionals make well-informed decisions regarding leadership and integrated primary-prevention efforts.

Research Questions

- 1) Is there any existing research that ties military command or organizational climate to the frequency or severity of harmful behaviors (e.g., suicide, intimate partner violence, child abuse/neglect, sexual assault and/or harassment, and retaliation)?**

Negative work environments increase the risk for harmful behaviors, including self-harm and suicide, in military and civilian populations.

Extensive research indicates that work climate significantly affects the frequency and severity of harmful behaviors. Studies have shown that environments characterized by high stress, poor management, and lack of support can lead to increased rates of harmful behaviors, including violence, harassment, manipulation, retaliation, and self-harm. These behaviors can escalate to more severe outcomes like violence or suicide (Bowling & Beehr, 2006; Hauge et al., 2010; Howard et al., 2022).

Overall, the research illustrates the importance of a positive organizational climate and strong, supportive leadership in reducing the frequency and severity of harmful

behaviors in the military. Commands that actively uphold an environment of trust, respect, and support contribute to improving well-being and decrease the chance of negative behaviors such as interpersonal (e.g., violence that occurs between individuals such as sexual assault or intimate partner violence) and intrapersonal violence (e.g., violence that occurs against oneself such as self-harm) (Bryan et al., 2017; Trachik et al., 2021; Iwamasa et al., 2023).

2) Is there a correlation between suicide risk factors and the type or lethality of means (e.g., gun, substance use) used for a suicide attempt? For example, do individuals experiencing financial stress tend to use different means to attempt suicide than those experiencing relationship stress?

Studies suggest that high-lethality suicide attempts are associated with male gender, suicidal intent, and environmental factors such as temperature. Other studies indicate that specific stressors like financial or relationship stress are not directly linked to the lethality or type of suicide attempt.

The technical assistance team found no studies that directly addressed a connection between the type of stress and the means used in a suicide attempt. However, studies often mention that the accessibility of means (e.g., access to firearms) can influence the severity of a suicide attempt. Additionally, the research shows that factors such as impulsivity, aggression, and hostility are more general risk factors for suicidality rather than specific determinants of severe suicide attempts (Aguglia et al., 2021; Fallahi-Khoshknab et al., 2023; Levi-Belz et al., 2020).

3) Do new trainees who use less lethal means to attempt suicide want to end their lives or do they just want out of the military as compared to those who use more lethal means to attempt suicide (e.g., as demonstrated by historically high rates of gunshot wounds in the military)?

The answer depends on the person and the situation. A range of factors, including psychological state, impulsivity, access to means, and the presence or absence of social support, can influence the lethality of the method and the intent behind suicide attempts.

Some individuals may use less lethal means to seek help or signal distress. Individuals with self-directed motivations or feelings of thwarted belongingness, in other words those who feel driven by their own internal struggles or who feel like they don't belong, may have a stronger intent to die. On the other hand, individuals who have interpersonal motivations or those who are prompted by issues within their existing relationships may be exhibiting cries for help rather than attempting to end their life (Brown et al., 2004; Marzano et al., 2021).

4) Are those who attempt suicide with less lethal means more likely to attempt suicide again as compared to someone who has never attempted suicide?

Individuals who attempt suicide, regardless of the lethality of the method, are at a significantly higher risk of attempting suicide again compared to those who have never attempted suicide (Fehling & Selby, 2021; Runeson et al., 2010; Witt et al., 2021).

a) If individuals attempt suicide again, do they tend to use more lethal means?

Most people who use less lethal means tend to stay at the same lethality level on their second attempt.

While repeat suicide attempts often involve the same method, some individuals may switch to a more lethal method in order to, potentially, increase the risk of suicide completion. This change of method could be a sign of a stronger suicidal intent. However, those who attempt suicide by highly lethal methods are likely to choose the same means for successive attempts, which may result in completed suicide. This complex and situational question heavily depends on the person and their environment (Fehling & Selby, 2021; Runeson et al., 2010; Witt et al., 2021).

b) For Service members who have previously attempted suicide, would an increased risk of future suicide attempts exist throughout their career?

The risk of future suicide attempts is greatest immediately after a first attempt and can continue to be higher than average for many years. This risk is further elevated for individuals who had multiple prior attempts compared to those with only one attempt (Runeson et al., 2010; Fehling & Selby, 2021).

5) What is the comparison between Army suicide rates and the general population?

The Army suicide rate for calendar year 2022 was 28.9 per 100,000. The general population age-adjusted suicide rate for 2022 was 14.5 per 100,000. However, the Department of Defense (DoD) reports that military suicide rates, in general, tend to be similar to those of the general United States population after accounting for age and sex differences (AFSP, 2024; DoD, 2024).

6) What is the impact of alcohol or drug use on suicide?

Alcohol and drug use can significantly impact suicide risk by increasing impulsivity, exacerbating mental health conditions, and impairing judgment.

Substance-use disorders often co-occur with mental health disorders, which can further elevate suicide risk. Some individuals may use substances as an unhealthy coping mechanism, and this practice can worsen underlying issues. Addressing substance abuse and co-occurring mental health conditions through integrated treatment approaches is crucial for suicide prevention as substance-use disorders are associated with a high risk of suicide mortality (Lynch et al., 2020; Iwamasa et al., 2023).

References

- Aguglia, A., Giacomini, G., Montagna, E., Amerio, A., Escelsior, A., Capello, M., Cutroneo, L., Ferretti, G., Scafidi, D., Costanza, A., Serafini, G., & Amore, M. (2021). Meteorological variables and suicidal behavior: Air pollution and apparent temperature are associated with high-lethality suicide attempts and male gender. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsyt.2021.653390>.
- American Foundation for Suicide Prevention. (2024). *Suicide statistics*. <https://afsp.org/suicide-statistics/>
- Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *The Journal of Applied Psychology*, 91(5), 998–1012. <https://doi.org/10.1037/0021-9010.91.5.998>
- Brown, G. K., Henriques, G. R., Sosdjan, D., & Beck, A. T. (2004). Suicide intent and accurate expectations of lethality: Predictors of medical lethality of suicide attempts. *Journal of Consulting and Clinical Psychology*, 72(6), 1170–1174. <https://doi.org/10.1037/0022-006X.72.6.1170>
- Bryan, C., Burch, T., Clemans, T., Leeson, B., Maney, E., Mintz, J., Rudd, M., & Williams, S. (2017). Effect of crisis response planning vs. contracts for safety on suicide risk in U.S. Army soldiers: A randomized clinical trial. *Journal of Affective Disorders*, 212, 64-72. <https://doi.org/10.1016/j.jad.2017.01.028>
- Fallahi-Khoshknab, M., Amirian, Z., Maddah, S. S. B., Khankeh, H. R., & Dalvandi, A. (2023). Instability of emotional relationships and suicide among youth: A qualitative study. *BMC Psychiatry*, 23(1), 50. <https://doi.org/10.1186/s12888-023-04534-0>
- Fehling, K. B., & Selby, E. A. (2021). Suicide in DSM-5: Current evidence for the proposed suicide behavior disorder and other possible improvements. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsyt.2020.499980>
- Hauge, L. J., Skogstad, A., & Einarsen, S. (2010). The relative impact of workplace bullying as a social stressor at work. *Scandinavian Journal of Psychology*, 51(5), 426–433. <https://doi.org/10.1111/j.1467-9450.2010.00813.x>
- Howard, M. C., Follmer, K. B., Smith, M. B., Tucker, R. P., & Van Zandt, E. C. (2022). Work and suicide: An interdisciplinary systematic literature review. *Journal of Organizational Behavior*, 43(2), 260–285. <https://doi.org/10.1002/job.2519>

- Iwamasa, G., Blais, R., Bryan, C., Reed, J., Gamble, S., Ramchand, R., West, N., Trost, C., Robertson, K., & Wright, K. (2023). *Preventing suicide in the US Military: Recommendations from the suicide prevention and response independent Review committee*. Suicide Prevention and Response Independent Review Committee. <https://media.defense.gov/2023/Feb/24/2003167430/-1/-1/0/SPRIRC-FINAL-REPORT.PDF>
- Levi-Belz, Y., Gvion, Y., & Apter, A. (2020). The serious suicide attempts approach for understanding suicide: Review of the psychological evidence. *OMEGA - Journal of Death and Dying*, 86(2), 591-608. <https://doi.org/10.1177/0030222820981235>
- Lynch, F. L., Peterson, E. L., Lu, C. Y., Hu, Y., Rossom, R. C., Waitzfelder, B. E., Owen-Smith, A. A., Hubley, S., Prabhakar, D., Keoki Williams, L., Beck, A., Simon, G. E., & Ahmedani, B. K. (2020). Substance use disorders and risk of suicide in a general US population: A case control study. *Addiction Science & Clinical Practice*, 15(1), 14. <https://doi.org/10.1186/s13722-020-0181-1>
- Marzano, L., Katsampa, D., Mackenzie, J.-M., Kruger, I., El-Gharbawi, N., Ffolkes-St-Helene, D., Mohiddin, H., & Fields, B. (2021). Patterns and motivations for method choices in suicidal thoughts and behaviour: Qualitative content analysis of a large online survey. *BJPsych Open*, 7(2), e60. <https://doi.org/10.1192/bjo.2021.15>
- Runeson, B., Tidemalm, D., Dahlin, M., Lichtenstein, P., & Långström, N. (2010). Method of attempted suicide as predictor of subsequent successful suicide: National long term cohort study. *BMJ*, 341(1), c3222. <https://doi.org/10.1136/bmj.c3222>
- Trachik, B., Oakey-Frost, N., Ganulin, M. L., Adler, A. B., Dretsch, M. N., Cabrera, O. A., & Tucker, R. P. (2021). Military suicide prevention: The importance of leadership behaviors as an upstream suicide prevention target. *Suicide and Life-Threatening Behavior*, 51, 316-324. <https://doi.org/10.1111/sltb.12707>
- Trachik, B., Moscardini, E., Ganulin, M. L., McDonald, J. L., McKeon, A. B., Dretsch, M. N., Tucker, R. P., & Sowden, W. J. (2022). Perceptions of purpose, cohesion, and military leadership: A path analysis of potential primary prevention targets to mitigate suicidal ideation. *Military Psychology*, 34(3), 366-375. <https://doi.org/10.1080/08995605.2021.1962184>
- United States Department of Defense. (2023). *Annual report on suicide in the military calendar year 2022*. Undersecretary of Defense for Personnel and Readiness.

https://www.dspo.mil/Portals/113/Documents/ARSM_CY22.pdf?ver=StAk_g6lJgNRUsOlptzVVA%3d%3d

Witt, K., Pirkis, J., Scott, D., Smith, K., & Lubman, D. (2021). Trajectories in suicide attempt method lethality over a five-year period: Associations with suicide attempt repetition, all-cause, and suicide mortality. *PloS One*, 16(1), e0245780. <https://doi.org/10.1371/journal.pone.0245780>