

Risk Factors for Pathological Cannabis Use among Israeli Combat Veterans: Preliminary Empirical and Narrative Findings

Miri Serebro¹, Avia Ashwall¹, Shira Sobol-Goldberg² and Daniel Feingold³

1. MA program, Psychology Department, Ariel University, Israel.

2. School of Social Work, Bar-Ilan University, Israel

3. Psychology Department, Ariel University, Israel.



Conflict of interest: None

Introduction

- Cannabis is the most commonly used drug in the world, with recent increase in its prevalence reported in North America and Europe¹.
- Cannabis use disorder (CUD) refers to distress or a clinical disability caused by cannabis use, with effects lasting for 12 months or more. Coping motives have been associated with increased risk for developing CUD².
- Studies have indicated that former military personnel, and combat veterans in particular, are at higher risk for substance use and misuse, including cannabis use and CUD^{3,4}.
- Post-traumatic symptoms (PTSS) during and following military service have been associated with pathological cannabis use⁵. However, the extent to which cannabis motives may play a role in the association is yet unknown.
- Military combatants who engage in combat action are at risk of developing moral injury, a shame and guilt-based trauma-related syndrome^{6,7}.
- Greater moral injury has been associated with more frequent cannabis use⁸, yet the association between moral injury and CUD has not been explored to date, nor was the mediating role of cannabis motives in this context.

Study aim

The current study examined the association between PTSS, moral injury, cannabis use motives and pathological cannabis use among combat veterans who use cannabis regularly.

Method

A mixed-methods study including both quantitative and qualitative methodologies⁹.

The quantitative study

Participants

50 persons aged 18-35 participated in this study. All participants served at least one year in combat units and were discharged from service up to five years prior to the study. All participants reported regular cannabis use (at least three times a week) during the six months prior to the study. Participants were recruited through social media and were directed to an online link including the relevant questionnaires.

Measures

Cannabis Use Disorder Identification Test Revised (CUDIT-R)¹⁰.

Posttraumatic Stress Disorder Checklist (PCL-5)¹¹.

Marijuana Motives Measure (MMM)¹².

Moral Injury Event Scale (MIES)¹³.

The qualitative study

Participants

Seven participants from the quantitative study who screen positive for CUD according to the CUDIT-R and provided contact information were recruited.

Measures

Diagnosis of DSM-5 CUD was confirmed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-5 (AUDADIS-5), a structured interview that has previously shown substantial reliability in assessing CUD in the general population.

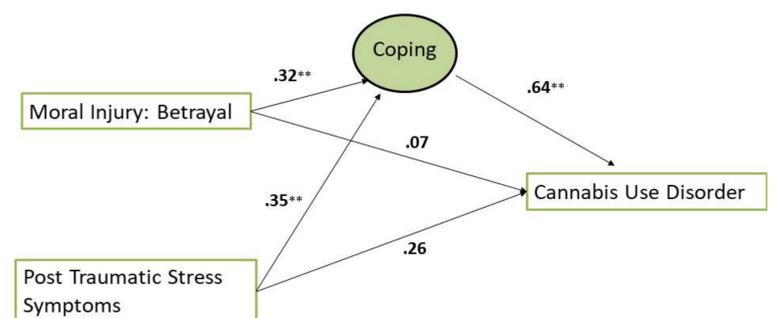
A semi-structured interview was conducted with each study participant, focusing on major life events as well as changes in patterns of cannabis use throughout three different periods: preceding military service, during the service and following military service

All interviews were transcribed and analyzed using ATLAS.ti software and thereafter coded in accordance with themes that emerged from the text.

Results

Quantitative study

- Mean age among study participants was 24.96 (S.D.= 1.73). Mediation analyses were conducted using the PROCESS module¹⁴.
- The association between moral injury-betrayal and CUD was mediated by coping motives (B=0.27, S.E=0.13 t=2.18, p<0.05), so that higher sense of betrayal was associated with increased coping motives for cannabis use, which in turn were associated with increased CUD score.
- The association between PTSS and CUD was mediated by coping motives (B=0.06, S.E=0.03 t=2.34, p<0.05), so that higher level of PTSS was associated with increased coping motives for cannabis use, which in turn were associated with increased CUD score.



Qualitative study

Themes identified:



Discussion

Our findings suggest that PTSS and moral injury associated with a sense of betrayal are associated with CUD through the moderating role of coping motives for cannabis use. It may well be that PTSS and sense of betrayal elevate emotional distress, which is in turn "medicated" with the use of cannabis, resulting in pathological patterns of cannabis use (i.e physical and psychological dependence or impaired functioning). Moral injury, and particularly sense of betrayal, as well as coping motives for cannabis use, should be carefully assessed when addressing CUD among combat veterans.



1) United Nations Office on Drugs and Crime (UNODC) (2017). UNODC world drug report - 2) van der Pol, P. et al. (2013). Predicting the transition from frequent cannabis use to cannabis dependence: a three-year prospective study. *Drug and Alcohol Dependence*, 133(2), 352-359. 3) Bray, R. M. et al. (2010). Substance use and mental health trends among US military active duty personnel: Key findings from the 2008 DoD Health Behavior Survey. *Military Medicine*, 175(6), 390-399. 4) Larson, M. J. et al. (2012). Military combat deployments and substance use: Review and future directions. *Journal of Social Work Practice in the Addictions*, 12(1), 6-27. 5) Boden, M. T. et al. (2013). Posttraumatic stress disorder and cannabis use characteristics among military veterans with cannabis dependence. *The American Journal on Addictions*, 22(3), 277-284. 6) Frankfort, S., & Frazier, P. (2016). A review of research on moral injury in combat veterans. *Military Psychology*, 28(5), 318-330. 7) Vargas, A. F. et al. (2013). Moral injury themes in combat veterans' narrative responses from the National Vietnam Veterans' Readjustment Study. *Traumatology*, 19(3), 243-250. 8) Feingold, D. et al. (2018). The Association between moral injury and substance use among Israeli combat veterans: The mediating role of distress and perceived social support. *International Journal of Mental Health and Addiction*, 17(2), 217-23. 9) Bergman, M. M. (Ed.). (2008). *Advances in mixed methods research: Theories and applications*. Sage, 10) Adamson, S. et al. (2010). An improved brief measure of cannabis misuse: The Cannabis Use Disorders Identification Test-Revised (CUDIT-R). *Drug and Alcohol Dependence*, 110(1-2), 137-143. 11) Bovin, M. J. et al. (2015). Psychometric properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (PCL-5) in Veterans. *Psychological Assessment*, 28, 1379-1391. 12) Benschop, A. et al. (2015). Reliability and validity of the Marijuana Motives Measure among young adult frequent cannabis users and associations with cannabis dependence. *Addictive Behaviors*, 40, 91-95. 13) Nash, W. P. et al. (2013). Psychometric evaluation of the moral injury events scale. *Military Medicine*, 178(6), 14) Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3), 879-891.