Mental health symptom severity in cannabis using and non-using Veterans with probable PTSD

Matthew J. Johnson a,b, John D. Pierce b, Shahrzad Mavandadi c, Johanna Klaus c, Diana Defelice c, Erin Ingram c, David W. Oslin c,d

a Rowan University School of Osteopathic Medicine, Stratford, NJ, b Thomas Jefferson University, Philadelphia, PA, c Corporal Michael J. Crescenz VA Medical Center, Philadelphia PA, d University of Pennsylvania Perelman School of Medicine, Philadelphia, PA.

Background

Post-Traumatic Stress Disorder (PTSD) Prevalence
- Markedly higher in Veteran populations compared to non-Veterans.
- Estimated PTSD prevalence rate for Iraqi and Afghanistan Veterans is 23% (Vaughan et al., 2014).

PTSD and Cannabis Use
- Many Veterans struggling with PTSD turn to cannabis use for relief, but evidence of its effectiveness is mixed.
- Greer et al. (2014) found a reduction of PTSD symptomatology among cannabis-using patients
- Bonn-Miller et al. (2013) found that individuals admitted to a residential program with a current cannabis use disorder had lower rates of improvement in PTSD scores.

Purpose of the Present Study
- To examine correlates of cannabis use among a large clinical population of Veterans with probable PTSD.
- We hypothesized that symptom severity would be lower in cannabis users (cases) compared to non-users (controls), and that frequency of cannabis use would be associated with fewer symptoms of PTSD.

References

Method
- The study was a matched case-control cross-sectional study using data from January 2011–December 2014 comparing cannabis users (n=350) to non-users (n=350) case-matched on age and gender.
- Data were used to evaluate the psychiatric and sociocultural associations of cannabis use in Veterans with probable PTSD.
- Measures included the PTSD Checklist-Civilian Version (PCL-C), two questions from the Alcohol, Smoking, and Substances Involvement Screening Test (ASSIST), the Patient Health Questionnaire for depression (PHQ-9), and the Paykel questionnaire for suicidal ideation.

Results
- PTSD severity did not differ between cannabis-users and non-users (Figure 1).
- Cases were less likely to be single, more financially stable, and unemployed (Table 1).
- Cannabis users had greater levels of comorbidity in alcohol consumption than non-users (Table 1).
- Suicidal ideation was significantly less severe in users than in non-users (Table 1).
- Differences in depressive symptomatology did not reach statistical significance (Figure 2).

Table 1: Demographic and clinical scores of cannabis-using veterans versus controls

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cannabis Cases (N=350)</th>
<th>Control Cases (N=350)</th>
<th>Test statistic (cases vs. controls)</th>
<th>p value (cases vs. controls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race (% Caucasian)</td>
<td>36%</td>
<td>59%</td>
<td>$X^2 (1) = 40.01$</td>
<td>0.001</td>
</tr>
<tr>
<td>Married</td>
<td>32%</td>
<td>51%</td>
<td>$X^2 (1) = 26.08$</td>
<td>0.001</td>
</tr>
<tr>
<td>Employed</td>
<td>23%</td>
<td>40%</td>
<td>$X^2 (1) = 21.38$</td>
<td>0.001</td>
</tr>
<tr>
<td>Financially stable</td>
<td>61%</td>
<td>71%</td>
<td>$X^2 (1) = 8.15$</td>
<td>0.001</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>33%</td>
<td>26%</td>
<td>$X^2 (1) = 4.17$</td>
<td>0.04</td>
</tr>
<tr>
<td>Alcohol use (drinks/week)</td>
<td>6.3 (10.1)</td>
<td>3.1 (7.0)</td>
<td>$t (349) = 4.65$</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Conclusions and Acknowledgements
- Cannabis-using Veterans with probable PTSD did not differ significantly on PTSD symptomatology from non-cannabis users, but had significantly greater suicidal ideation and greater comorbidity of alcohol consumption.
- Depressive symptomatology was found to be associated with frequency of cannabis use; those with greater depressive symptomatology were more likely to be daily cannabis users as opposed to non-daily users.
- The socio-cultural differences that were found mirror the findings in community based epidemiological data, though the magnitude of difference is greater in this clinical population.
- The study results do not preclude a therapeutic effect as cannabis users may have started out being more severe, but were reduced to similar levels of non-users.
- The sample is a convenience sample of Veterans being referred for a clinical assessment, and thus may not reflect the population of Veterans not seeking health care in the Veterans Affairs (VA) system.
- The prevalence of cannabis use among Veterans with PTSD further highlights the importance and need for scientific research into the potential therapeutic effects of cannabis.
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