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### Mental Health Symptom Severity in Cannabis-Using and Non-Using Veterans with probable PTSD

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

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## 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.

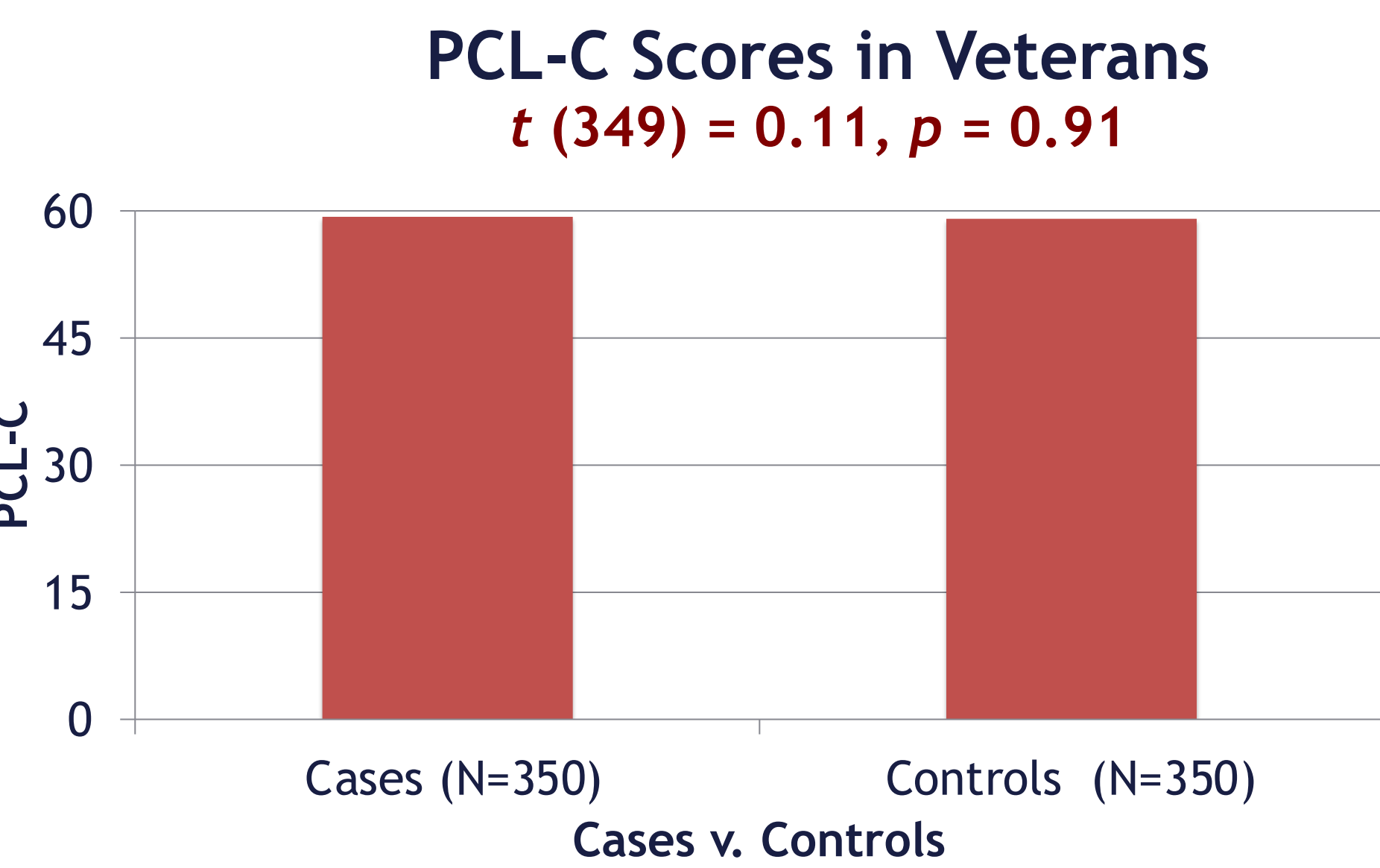
### Purpose of the Present Study

- 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.

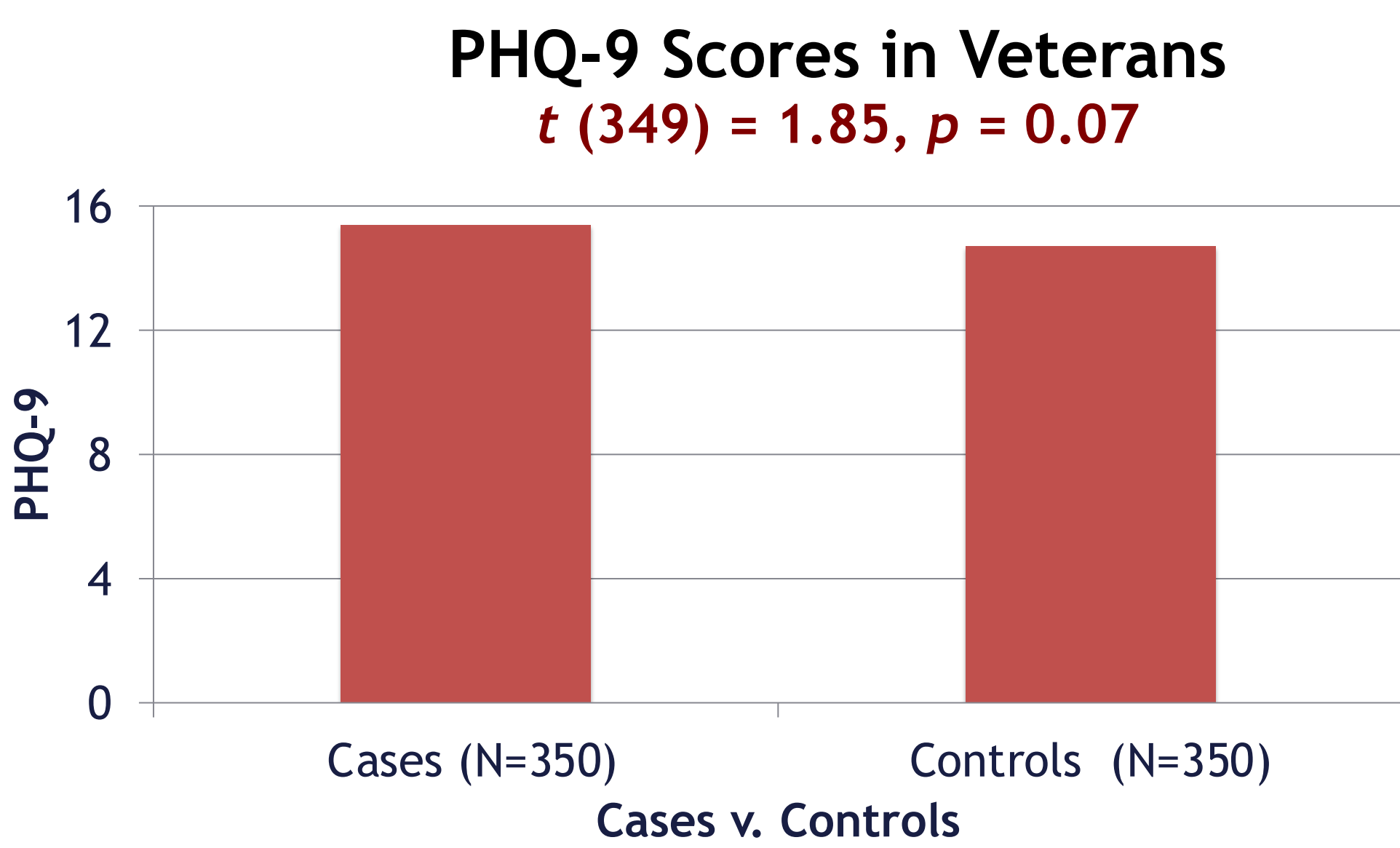
### References

Bonn-Miller, M.O., Boden, M.T., Vujanovic, A.A., Drescher, K.D., (2013). *Psychol. Trauma: Theory, Res., Pract., Policy*, 5, 193–200.  
Greer, G.R., Grob, C.S., Halberstadt, A.L., (2014). *J. Psychoact. Drugs*, 46, 73–77.  
Vaughan et al., (2014). *Psychiatric Services*, 65, 833-835.

## Comparison of Cannabis Using (Cases) and Non-Using (Controls) Veterans



**Figure 1:** Mean PCL-C scores for PTSD



**Figure 2:** Mean PHQ-9 scores for Depression

## 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 more likely to be single, of minority status, less 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 more severe in users than in non-users (**Table 1**).
- Differences in depressive symptomatology fell just short of statistical significance (**Figure 2**).

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

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

## 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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