Stratford Campus Research Day

23rd Annual Research Day

May 2nd, 12:00 AM

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.

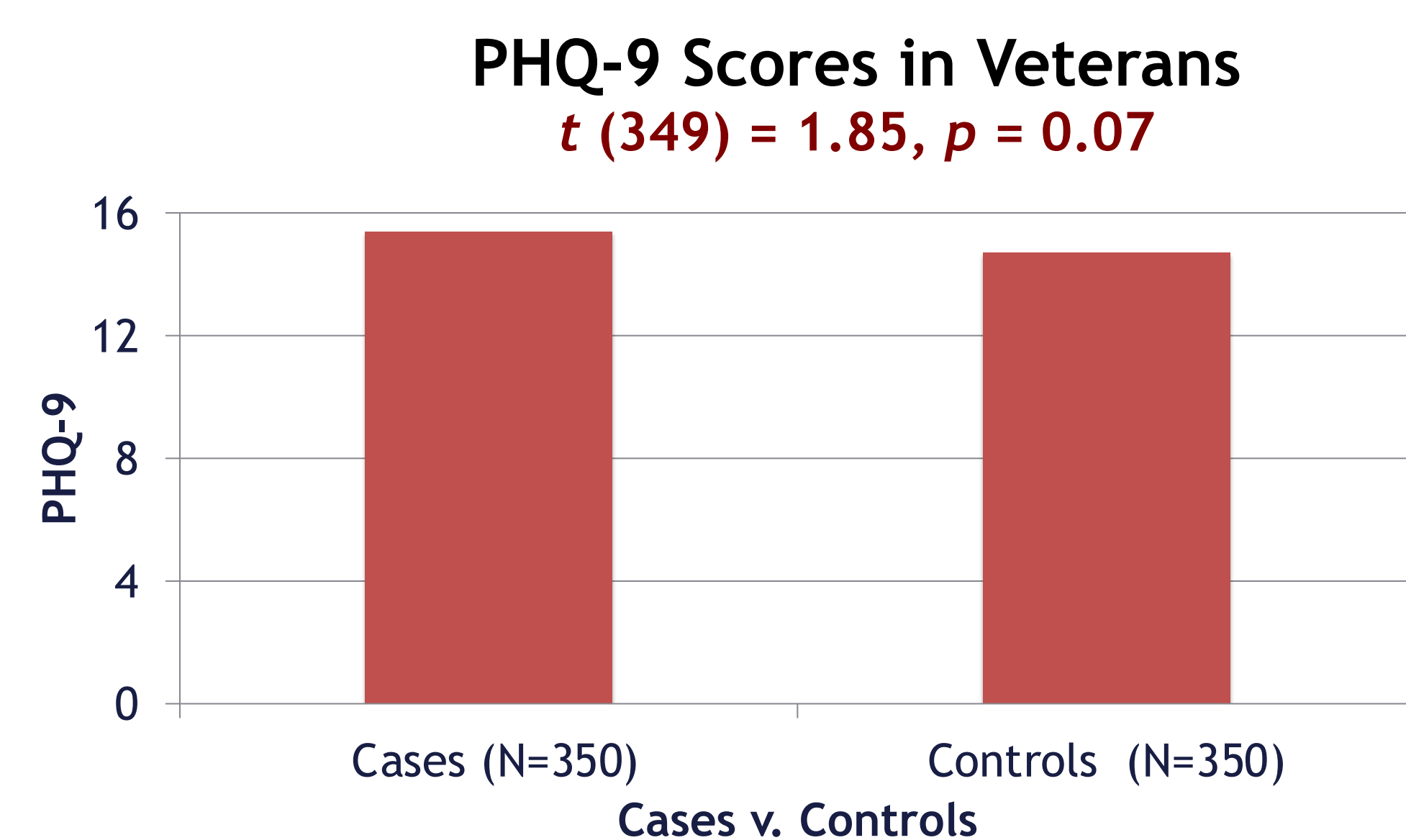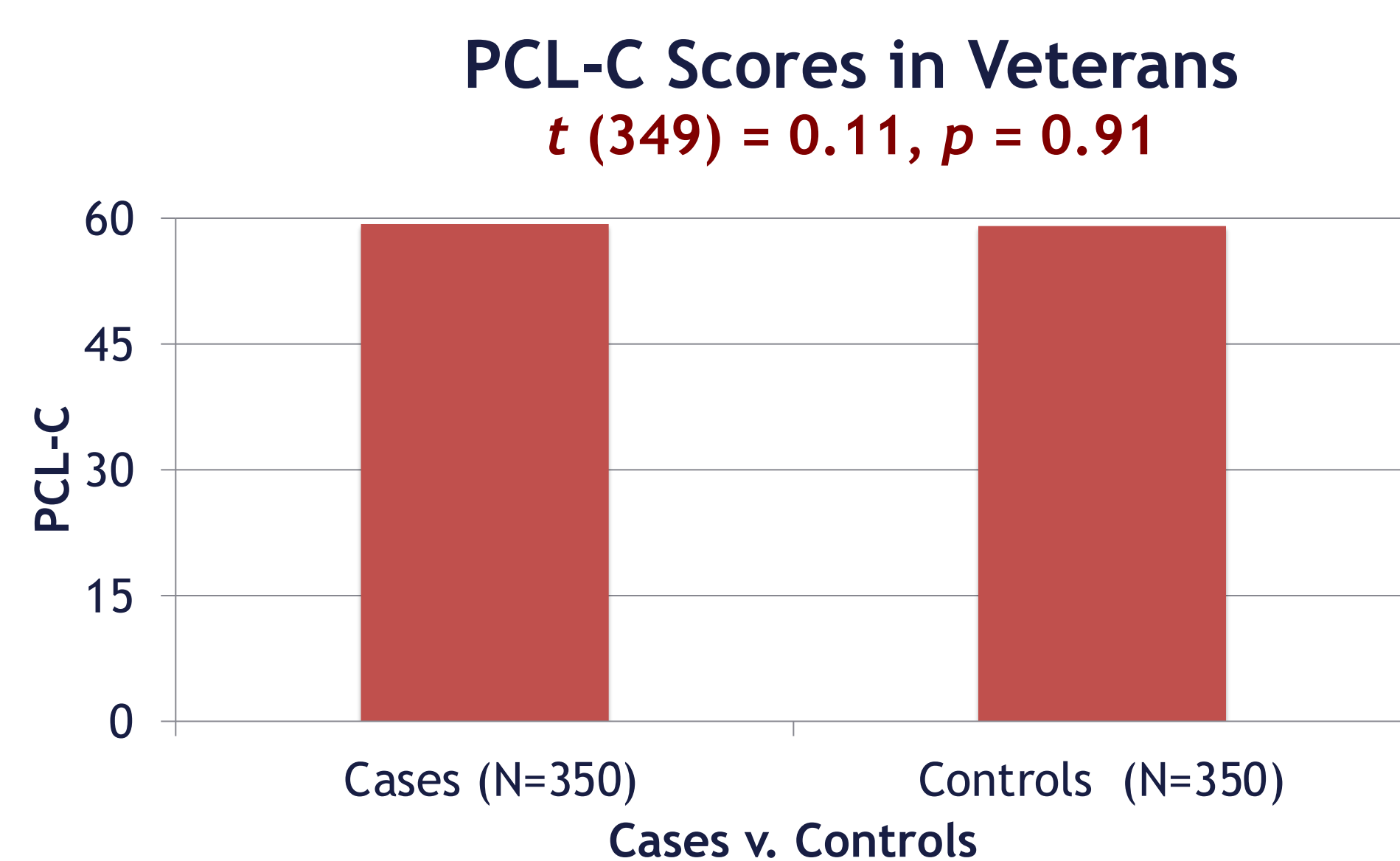## Comparison of Cannabis Using (Cases) and Non-Using (Controls) Veterans

PCL-C Scores in Veterans
$t (349) = 0.11, p = 0.91$

Figure 1: Mean PCL-C scores for PTSD

PHQ-9 Scores in Veterans
$t (349) = 1.85, p = 0.07$

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%	$X^2 (1) = 40.01$	0.001
Married	32%	51%	$X^2 (1) = 26.08$	0.001
Employed	23%	40%	$X^2 (1) = 21.38$	0.001
Financially stable	61%	71%	$X^2 (1) = 8.15$	0.001
Suicidal ideation	33%	26%	$X^2 (1) = 4.17$	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.

➢ The research presented has been prepared with the support of:

  ➢ Dean Michael Dryer, College of Science, Health, and Liberal Arts, Philadelphia University

  ➢ VISN4 Philadelphia VA Medical Center, Mental Illness Research, Education and Clinical Center (MIRECC)