

Cannabis use among traumatized military veterans: Effective treatment or self-medication?

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Photo courtesy: Scott Kirkpatrick

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Disclosure

I have no competing interests.

Study Overview

An online, anonymous survey to examine the prevalence of cannabis use among CAF veterans actively undergoing standard treatment for PTSD.

Study Objectives

(1) Estimate the prevalence of cannabis use among CAF veterans diagnosed with PTSD;

(2) Explore the reasons for cannabis use in this population;

(3) Examine the relationship between cannabis use and other substance use (both prescription and non-prescription);

(4) Explore cannabis use in relation to other aspects of health, namely PTSD symptom severity and chronic pain severity.

Participant Summary

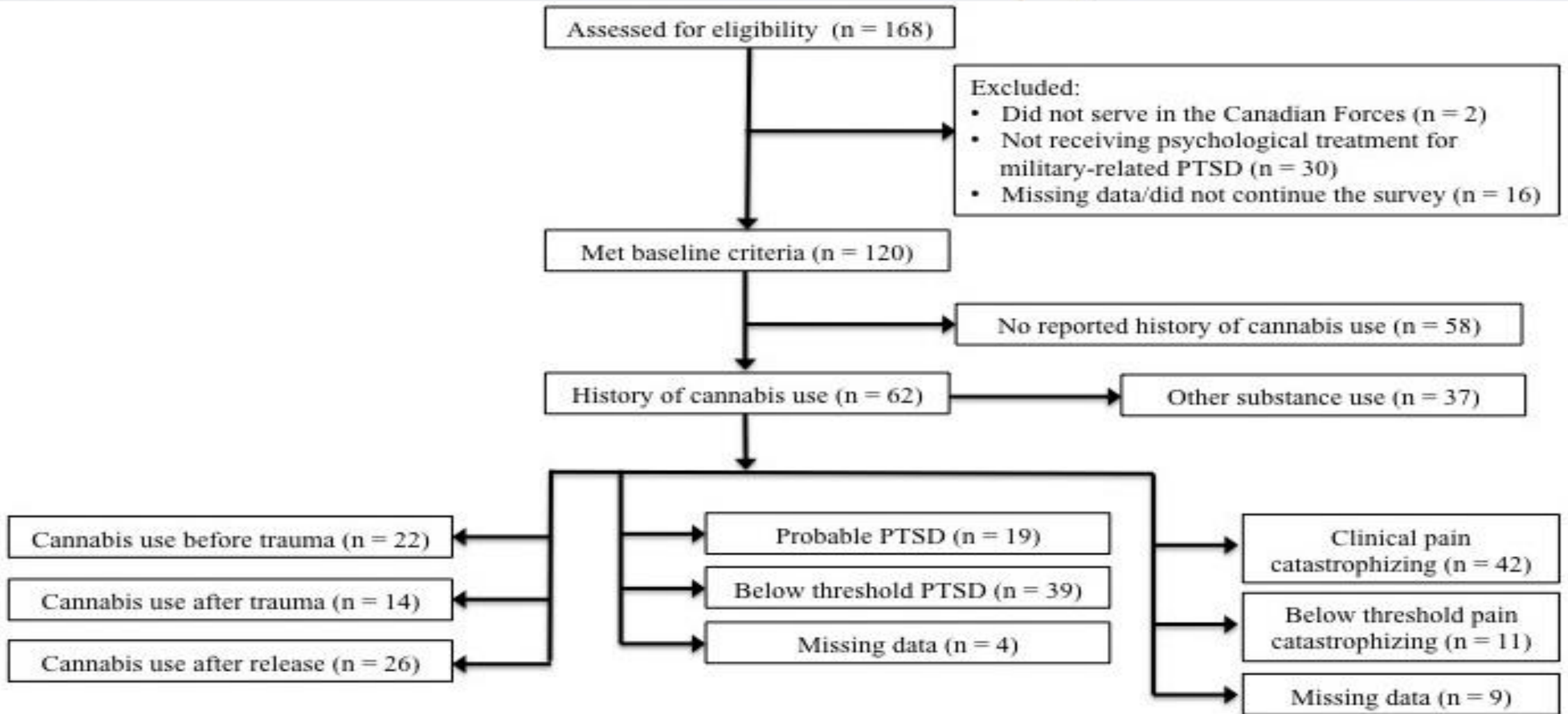


Figure 1 Participant flow diagram for respondents who reported a history of cannabis use in relation to the onset of cannabis use, use of other substances, and clinical levels of PTSD and pain symptom severity.

Demographic characteristics and drug use history in relation to cannabis use.

Demographic Characteristics And Drug Use History	Whole Sample (N = 120)	Denied Cannabis Use (n = 58)	Reported Cannabis Use (n = 62)
Age (M ± SD)	47.5 (8.2)	48.7 (7.9)	46.4 (8.3)
Sex (% male)	85	81	88.7
% Served – Army	71.7	70.7	72.6
% Served – Navy	31.7	36.2	27.4
% Served – Air Force	33.3	36.2	30.6
% Served – Reserves	18.3	29.3	8.1
% Served – Other	4.2	1.7	6.5
Number of tours (M ± SD)	2.7 (2.0)	2.4 (1.8)	2.9 (2.0)
% Had physical injury	91.7	91.4	91.9
% Medically released	65.8	56.9	74.2
PTSD severity (M ± SD)	38.3 (14.8)	37.9 (14.0)	38.5 (15.4)
Pain severity (M ± SD)	29.6 (13.3)	30.9 (13.1)	28.7 (13.5)
Cannabis abuse severity (M ± SD)	1.0 (1.8)	----	1.9 (2.1)
% Used cannabis before trauma	18.3	----	35.5
% Began cannabis use after trauma	11.7	----	22.6
% Began cannabis use after release	21.7	----	41.9
Number of other drugs used (M ± SD)	1.2 (2.0)	0.6 (1.0)	1.8 (2.4)
Number of prescription drugs used (M ± SD)	0.6 (1.2)	0.3 (0.7)	1.0 (1.4)
Number of non-prescription drugs used (M ± SD)	0.5 (1.1)	0.2 (0.5)	0.8 (1.4)

Note: M ± SD: Data provided is based on the mean and standard deviation.

Reliability analysis of the post-traumatic stress symptom severity scale, pain symptom severity scale, and the substance use severity scale.

Scale	Item	Scale			Chronbach
	Mean	Mean	Scale SD	Chronbach's alpha	range
PTSD severity (16 items)	5.12	82.02	11.05	0.87	0.86-0.87
Pain severity (13 items)	2.28	29.63	13.32	0.95	0.94-0.95
Substance severity (11 Items)	1.38	15.15	4.63	0.82	0.79-0.81

Between-Subjects PTSD Factors

	Group	N
PTSD Severity Percentiles	1.00	22
	2.00	23
	3.00	23
	4.00	24

PTSD Severity Percentiles: Group 1 (0 – 24.99)
Group 2 (25 -49.99)
Group 3 (50-74.99)
Group 4 (> 75)

Pearson r between drug categories

Drug Class	Cannabis	Opioids	Sedatives/Hypnotics	Hallucinogens
Opioids	0.30**			
Sedatives/Hypnotics	0.28**	0.19*		
Hallucinogens	0.27**	0.49***	0.10	
Stimulants	0.25**	0.63***	0.21*	0.63***

Notes. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

ANOVA Tests for Cannabis Use by Group

Group Comparisons	df	F	Sig.
Cannabis Amount and Onset of use Categories	2, 59	1.88	0.162
Duration of Use and Cannabis Abuse symptoms	2, 36	3.53	0.04*
Duration of Use and Prescription Usage	2, 36	1.71	0.196
Duration of Use and Non-prescriptions	2, 36	0.89	0.418

Notes:

Onset Categories:

Pre-trauma, Post-Trauma, Post-Release

Duration Categories:

< 3 months, 3 months to 1 year, > 1 year

Cannabis Abuse Symptoms:

SCID Non-patient version ; Scores range: 0 to 13

Cannabis Amount:

Ranging from 3 or 4 times per year up to 5 times per day.

Chi Square Analyses

Variable	'	Significance	Finding
Reservists and Regular Force and Cannabis use	9.034	$p = 0.003^*$	Reservists less likely to report Cannabis Use
Cannabis users/non-users and PTSD symptoms	0.40	$p = 0.527$	
Cannabis users/ non-users and Prescription Use	11.21	$p = 0.001^*$	Higher Prescription Use among Users
Cannabis users /non-users and Non-prescriptions	13.41	$p < 0.001^*$	Higher Non-prescription Use among Users

Summary of Main Findings

- **Cannabis use may provide symptomatic relief of mental distress and trauma-specific symptoms (e.g., providing emotional calm, managing intrusive PTSD symptoms, recreational activities, and sleep hygiene). Over 60% of Cannabis users reported these self-management efforts.**
- **Cannabis use was not related to reductions in prescribed psychotropic or analgesic medications.**
- **Cannabis use was related to increased risk of cannabis abuse symptoms and higher rates of non-prescription drug use.**
- **Implications for response to standard PTSD exposure-based interventions was unknown.**

Limitations

- **Not generalizable to broader population of military personnel or veterans who use Cannabis.**
- **Possible self-selection bias.**
- **Due to confidentiality concerns PTSD treatment status not confirmed**
- **Symptom focus excludes possible QOL improvements among Cannabis users (e.g., family, social, recreational).**

Future Research

- **Formal study to verify specific Cannabis strains and dosages and PTSD treatment trajectories.**
- **Better understanding of Cannabis use in managing mental health symptoms in relation to chronic pain among PTSD clients (e.g., the role of somatization).**

A photograph of a border fence with a 'MINES' sign and a guard tower in the background. The fence is made of metal posts and barbed wire. The sign is red and triangular with the word 'MINES' in white. The guard tower is a multi-story building with a small window. The background is a field of tall, dry grasses under a hazy sky.

MINES

THANK YOU

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Abstract

Medical cannabis is an accepted treatment for Canadian veterans diagnosed with PTSD in spite of the paucity of research. In this study of 120 military veterans undergoing trauma treatment, 50% reported cannabis use; 35% began using cannabis before a military trauma, 23% following a traumatic event, and 42% began cannabis use following military release. Cannabis was reportedly used primarily for relaxation and emotional calm. No relationships were found between cannabis use and PTSD symptom severity. Cannabis use after military trauma was related to a greater risk of cannabis use disorder and onset of use after release was linked with risks to use other illicit substances. Reports of cannabis use for emotional management presents challenges to accepted PTSD interventions (Prolonged Exposure, Cognitive Processing Therapy) and raises concerns over substance use disorders. Findings support ongoing research emphasizing the importance of emotional self-regulation skills to reduce rates of chronic PTSD among military veterans.