

Introduction

- In 2012, the National Survey on Drug Use and Health reported 2.7 million people 12 years of age and older met criteria for dependence on marijuana and 8.6 million people met the criteria for alcohol dependence¹.
- With the upcoming legalization of recreational cannabis use in Canada, there is a growing concern associated with increased cannabis use and its' effects on mental health and addictions.
- Current literature suggests that individuals who use cannabis at a younger age and more frequently may be at increased risk of developing concurrent disorders including alcohol misuse².
- **Primary aim:** to examine the prevalence, motives and severity of cannabis use in young adults.
- **Secondary aim:** to examine the correlations between cannabis use and psychiatric symptoms.

Methods

Recruitment – The Behavioural Economic Trajectories of Alcohol Misuse in Hamilton (BETA-H) study recruited young adults between the ages of 20-23 from the general population in the Hamilton community (N=405). Each participant completed a one-time assessment visit at the Peter Boris Center for Addictions Research at St. Joseph's Healthcare Hamilton or McMaster University.

Analysis – Data collected from the following psychometrically validated tools were used for correlational analysis.

Substance use:

- Cannabis Use Disorders Identification Test (CUDIT)
- Marijuana Consequences Questionnaire
- Alcohol Use Disorder Identification Test
- Daily Drinking Questionnaire/Drinking Driving Questionnaire
- Young Adult Alcohol Consequences Questionnaire

Psychiatric symptoms:

- WHO ADHD Screen
- Mood Disorder Questionnaire
- Psychosis Screen
- PTSD Checklist for DSM-5

Results

Table 1.1 – Demographics Information

Demographics Information (N=405)	Frequency (Percentage)
Sex	
Male	118 (29.1%)
Female	287 (70.9%)
Age	
20 Years old	106 (26%)
21 Years old	101 (25%)
22 Years old	96 (24%)
23 Years old	102 (25%)
Mean age	21.5 (SD=1.14)
Student Status	
4 Year graduate, or currently enrolled	269 (66%)
Not a college/university student	136 (34%)
Education Level	
Less than high school graduate	9 (2.2%)
High school graduate (or GED)	35 (8.5%)
Some college/university	260 (63.1%)
Associates degree completed	20 (4.9%)
Bachelors degree completed	77 (18.7%)
Masters degree completed	4 (1%)
Demographic Income	
Less than \$15,000	45 (10.9%)
At least \$15,000 but less than \$30,000	84 (20.4%)
At least \$30,000 but less than \$45,000	34 (8.3%)
At least \$45,000 but less than \$60,000	34 (8.3%)
At least \$60,000 but less than \$75,000	22 (5.3%)
At least \$75,000 but less than \$90,000	33 (8.0%)
At least \$90,000 but less than \$105,000	47 (11.4%)
At least \$105,000 but less than \$120,000	38 (9.2%)
Greater than \$120,000	68 (16.5%)

Table 1.2 –Cannabis and Alcohol Use Information

Cannabis Use	Frequency (Percentage)
Ever Used Cannabis	
Yes	343 (82.1%)
No	62 (17.9%)
Cannabis Use Frequency	
Multiple daily	24 (5.9%)
Daily	26 (6.4%)
Weekly	55 (13.5%)
Monthly	130 (31.1%)
Has tried cannabis	108 (25.8%)
Average Age of First Cannabis Use	
Drinks/week	16.5 (SD=2.4)
Mean	11.47 (SD=9.92)

Table 1.3 – Marijuana Motives Questionnaire Average Score

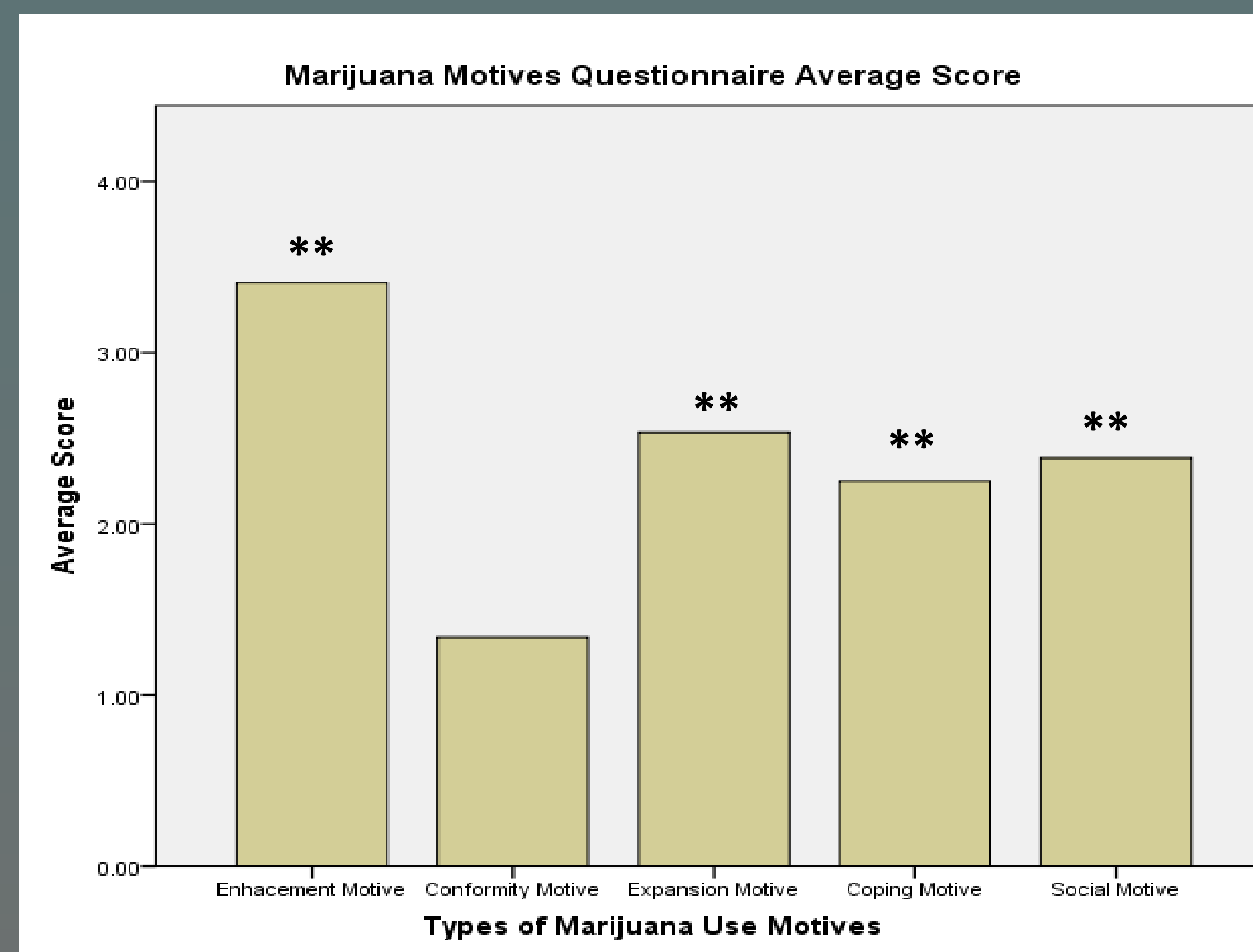
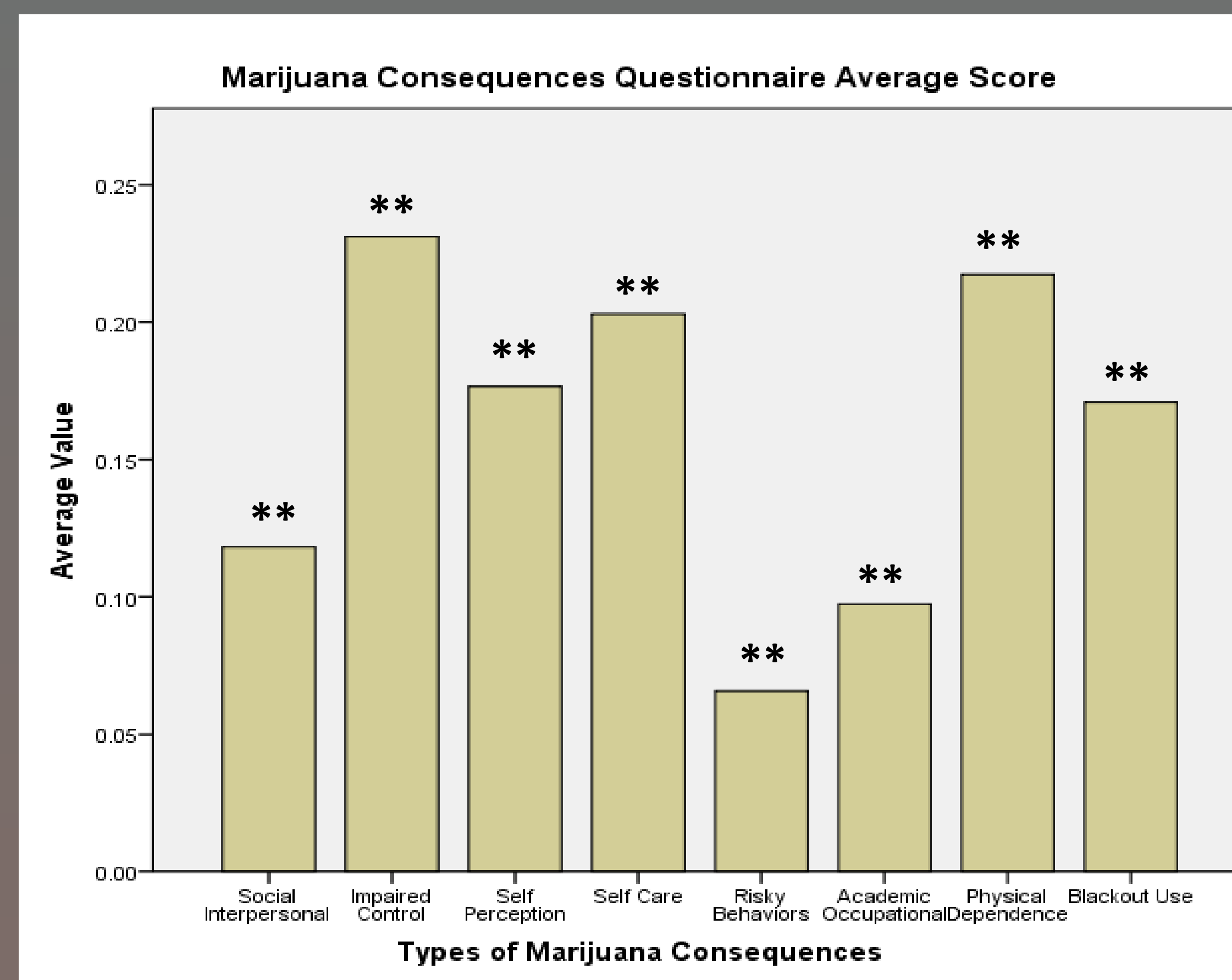


Table 1.4 – Marijuana Consequences Questionnaire Average Score



** Correlation is significant at p<0.01 level with Cannabis Use Identification Test

Table 1.5 –Correlation between Cannabis Use Identification Test and Psychiatric Symptoms

		World Health Organization Attention Deficit Hyperactivity Disorder	Mood Disorder Questionnaire	PTSD Checklist for DSM-5	Psychosis Screen Questionnaire	Alcohol Use Disorder Identification Test	Drinking Days Questionnaire
Cannabis Use Identification Test	Pearson Correlation	.220**	.195**	.338**	.323**	.186**	.063
	Sig. (2-tailed)	.001	.003	.000	.000	.004	.341
	N	235	235	235	235	235	235

** Correlation is significant at p<0.01 level (2 tailed)

Enhancement Motive

Enhancement of positive emotions (positive valence, internal source)

Conformity Motive

Conformity with others (negative valence, external source)

Expansion Motive

Expansion of perceptual and cognitive experience (positive valence, internal source)

Coping Motive

Coping with negative emotions (negative valence, internal source)

Social Motive

Increasing social experience (positive valence, external source)

Social Interpersonal

"While using marijuana I have said or done embarrassing things"

Impaired Control

"I have spent too much time using marijuana"

Self-perception

"I have felt guilty about my marijuana use"

Self-care

"I have been overweight because of my marijuana use"

Risky Behaviors

"I have driven a car when high"

Academic/Occupational

"I have gotten into trouble at work or school because of marijuana use"

Physical Dependence

"I have trouble sleeping after cutting down on marijuana use"

Blackout Use

"I have passed out from marijuana use"

Results Summary

Primary Aim

- Enhancement motive domain had the highest average score for marijuana use
- Enhancement motive, expansion motive, coping motive and social motive were positively correlated with CUDIT (coping motive being the highest correlated r=0.64)
- Impaired control and physical dependence scored the highest in Marijuana Consequences Questionnaire
- Impaired control and physical dependence were the most positively correlated domains with CUDIT score (r=0.81 and r=0.79 respectively)

Secondary Aim

- Cannabis Use Disorder Identification Score was positively correlated with WHO ADHD (ADHD); Mood Disorder Questionnaire (Bipolar disorder); PTSD Checklist (PTSD); Psychosis Screen Questionnaire (Psychosis); and Alcohol Use Identification Test (Alcohol Use).

Conclusion

Within the BETA-H cohort, marijuana use was positively correlated with coping motive but not conformity motive. This may suggest more internal motivation for cannabis use rather than external influences. As well, increased cannabis use may be associated with consequences such as impaired control, physical dependence on cannabis, and less self-care. Finally, extensive cannabis use may also be correlated with other psychiatric symptoms such as ADHD, bipolar disorder, PTSD, psychosis and alcohol use. Future research using the BETA-H cohort will highlight changes in psychiatric symptoms associated with prolonged cannabis use.

References

1. Center for Behavioral Health Statistics and Quality. National survey on drug use and health. Rockville, MD: Substance Abuse & Mental Health Services Administration, 2013.
2. Volkow, N., Baler, R., Compton, W. and Weiss, S. (2014). Adverse Health Effects of Marijuana Use. *New England Journal of Medicine*, 371(9), pp.878-879.