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Associations Among Motives for Cannabis Use, Expectancies of Cannabis Use and Chronic Pain in a Young Adult Sample

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BACKGROUND AND PURPOSE

- Chronic pain and cannabis use are prevalent in young adults.^{1,2}
- There is currently a lack of strong empirical evidence to suggest that cannabis is effective in treating chronic non-cancer pain.³
- Initial research indicates that pain relief may be a motive for cannabis use in young adults with chronic pain.⁴
- No studies have examined associations among pain, motives for cannabis use and expectancies of cannabis use in young adults.

METHODS AND DATA

Participants and Procedure

- 140 MTurk Participants (18-24 years old) completed psychological measures regarding cannabis use and pain
- Inclusion Criteria: 18 – 24 years old, able to read English, reside within the United States, and cannabis use within the past 3-months

Measures

- **Pain disability and intensity:** Graded Chronic Pain Scale (GCPS)⁵
 - Pain disability is the degree to which pain interferes with an individual's social, recreational and vocational activities; pain intensity is the level of pain an individual experiences
- **Motives for Cannabis Use:** Marijuana Motives Questionnaire (MMQ)⁶ – extended version
 - Self-reported reasons for use include seven subscales: social, coping, expansion, conformity, enhancement, routine use, and pain relief
- **Expectancies of Cannabis Use:** Marijuana Effect Expectancy Questionnaire (MEEQ)⁷
 - Expected outcomes that motivate cannabis use include six subscales: cognitive & behavioral impairment, relaxation & tension reduction, social & sexual facilitation, perceptual & cognitive enhancement, global negative effects, and craving & physical effects

Data-Analytic Strategy

- Bivariate associations among pain, cannabis use variables, and participant characteristics were examined; significant participant characteristics were included as covariates in linear regression models.
- Linear regression models were used to test associations between pain and cannabis variables. All 26 regression models tested gender differences with a gender*pain interaction term and controlled for CUDIT score, race, and education level as covariates.
- A Bonferroni correction of .002 was applied due to multiple comparisons.

RESULTS

Sample Descriptive Statistics

- $M_{age} = 23.03$ (SD = 1.34); 61.4% female; 74.1% White
- 55.7% of the sample endorsed cannabis use weekly or daily/almost daily within the past 3 months
- Most participants (83.1%) reported pain over the past three months (i.e., scores greater than 0)

Linear Regressions

- No gender differences were observed in any of the models (all $ps > .016$)
- Pain intensity was significantly associated with coping, conformity, expansion, routine use, and pain relief motives as well as global negative effects expectancies (all $ps \leq .001$)
- Pain disability was significantly associated with coping, conformity, social, expansion, and pain relief subscales as well as perceptual & cognitive enhancement and global negative effects expectancies (all $ps \leq .002$)

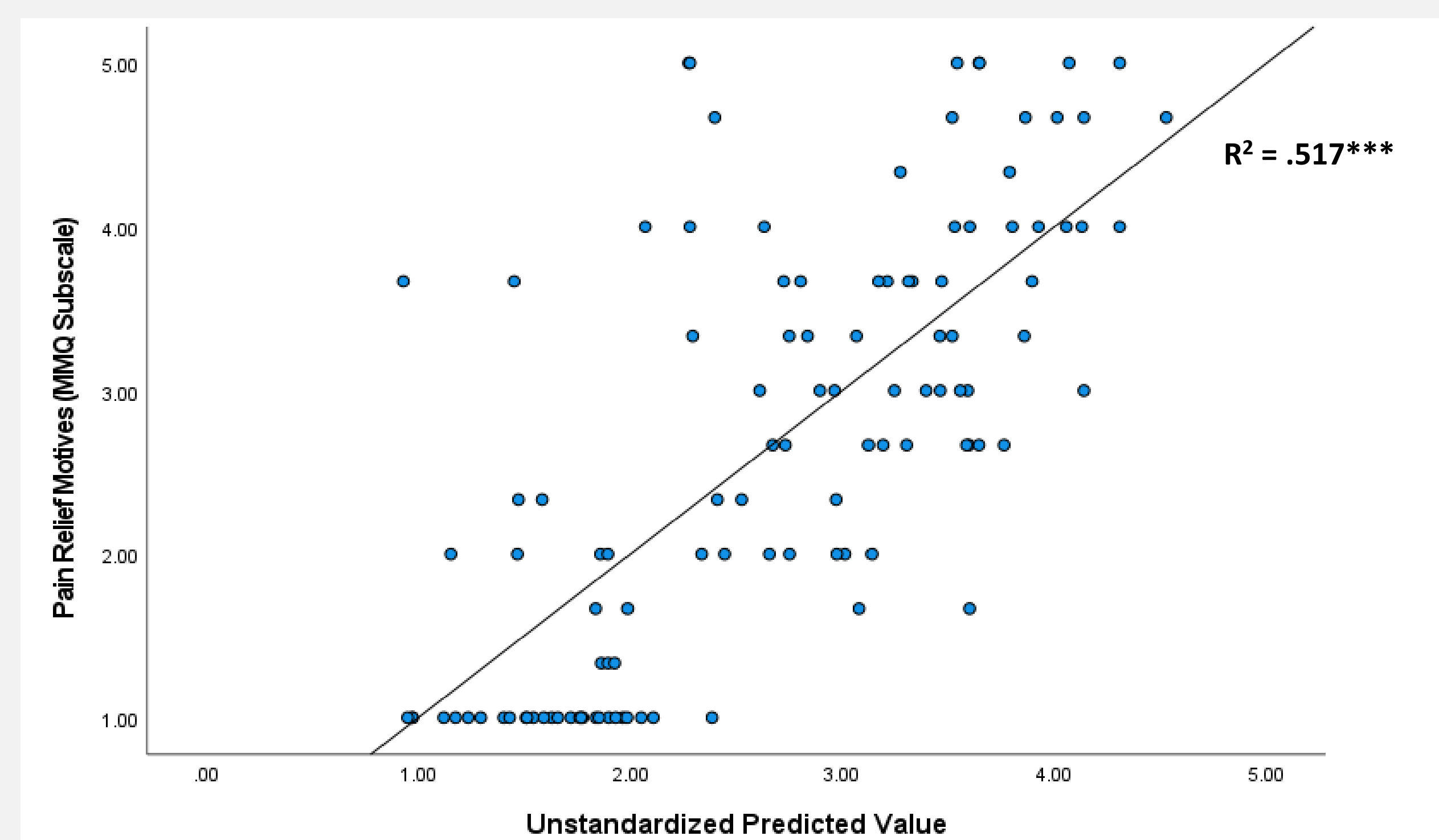


Figure 1. Linear regression model for pain intensity and pain relief motives (covariates: gender, education level, race, CUDIT score; gender*pain interaction term). $R^2 = .517$ (** $p < .001$)

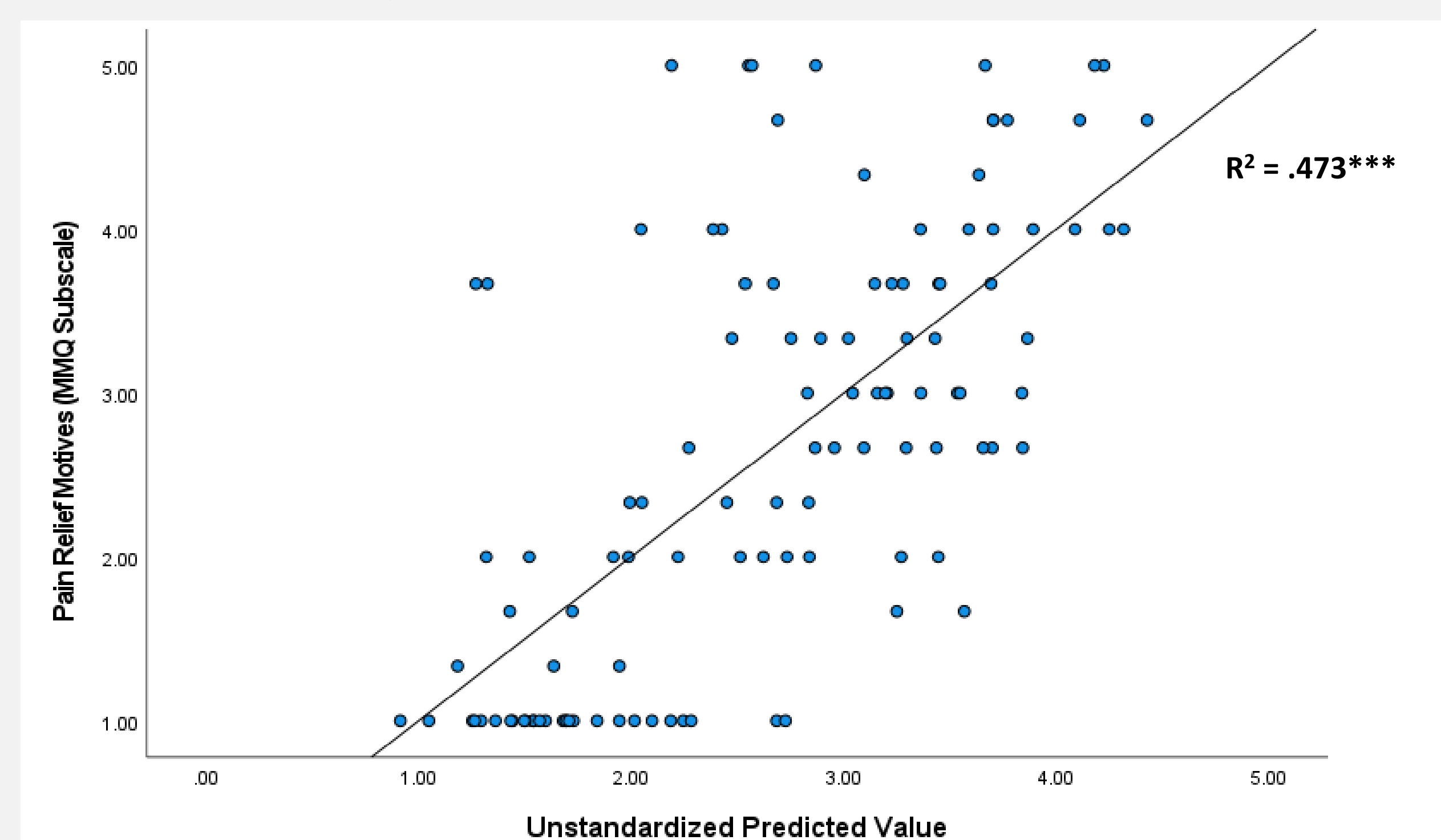


Figure 2. Linear regression model for pain disability and pain relief motives (covariates: gender, education level, race, CUDIT score; gender*pain interaction term). $R^2 = .473$ (** $p < .001$)

CONCLUSIONS

- Although young adults who experience higher pain intensity and/or disability levels expect greater negative effects of cannabis use, they also hold unique pain-related motives for their cannabis use.
- Pain-relief motives are consistent with use of cannabis for self-medication.⁸
- Although prior research has shown gender differences in associations between pain and substance use⁹, in our sample, there was no evidence that associations among pain and cannabis use motives and expectancies varied between men and women
- Further research is needed to determine:
 - The effects of polysubstance use and cannabis regulations on associations between pain and cannabis use among young adults
 - Changes in cannabis use and pain over time
 - Effective intervention efforts for individuals suffering from chronic pain and problematic cannabis use

MAIN FINDING

Young adults with greater levels of pain intensity and disability expected greater global negative effects of cannabis use. At the same time, they were still motivated to use cannabis for coping, conformity, expansion and pain relief reasons.

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