Self-Determination as a Moderator in the Relationship between Personality Traits and Cannabis Consumption

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Rationale for research

Rationale

- Transition to the faculty – followed with numerous changes and risk behaviours (O'Malley & Johnston, 2002)
- Increase of cannabis use among young people (ESPAD, HBSC, GPS…)
- Risk factors: individual & peer level? (Cleveland et al. 2008)
- Role of personality traits: extraversion conscientiousness, neuroticism? (Bogg & Roberts, 2004, Glavak Tkalić 2009; Terracciano et al. 2008)
- Self-Determination as a protective factor (e.g. alcohol: Neighbors et al. 2003)

Croatia: 15-20% students in s. dorms (Ilišin, 2014; Kovčo Vukadin, 2014)
☒ Predictors of cannabis use in this population are not explored enough
☑ Importance of motivational research (Ham & Hope 2003)

Self-Determination Theory

Self-Determination Theory

- Focus on individual factors
- Integrative tendency
- Organismic dialectical perspective
- Tested in a numerous health related behaviours, but to a lesser extend in the context of substance use (Smith, 2011)

- Meta-theory (Deci, 1972; Deci & Ryan, 1985; Deci & Ryan, 2000; Ryan & Deci, 2000b; Ryan & Deci, 2002):

Cognitive Evaluation	Organismic Integration	Causality Orientations
Basic Psychological Needs	Goal Contents	Relationships Motivation

Research model

Research model

SDT construct	Personality traits	Outcome
Self-Determination	Extraversion	Number of days person consumed cannabis in the lifetime
	Conscientiousness	
	Neuroticism	

"We truly understand some phenomenon if we are able to determine when the phenomenon will occur, why or how it occurs, and for whom it occurs or will occur" (Hayes 2005:428).

The aim & hypothesis

The aim of the research

To test the moderating role of Self-Determination in the relationship between some personality traits and frequency of cannabis consumption among students in students dormitories at the University of Zagreb.

Hypothesis

It is expected that

- there will be a positive correlation between frequency of cannabis consumption and Extraversion, and between frequency of cannabis consumption and Neuroticism among students that achieve high scores at the Self-Determination Scale
- frequency of cannabis consumption will be in negative correlation with Conscientiousness

- among students that achieve low score at the Self-Determination Scale, there will be no correlation between personality traits and frequency of cannabis consumption

Methodology*

* Research was conducted in accordance with the Code of Ethics of the University of Zagreb (2009), and approved by the Ethical Committee of the Faculty of Education and Rehabilitation Sciences.

Procedure

Formal request to the faculties
(March 2015)

Approval;
Timeline agreement

Measurement
(April-June 2015)

- During the lecture breaks
- Group measurement: self-report, 15’
- Written information for participants were provided

Participants

(quota sample regarding the gender and the field of the study)

Scientific Fields	Faculty	Departments
Science	Faculty of Science	Mathematics, Biology
Technical	FEE&C, FCE&T, FCE	
Biomedical	Medicine, Dental Medicine, Veterinary	
Biotechnical	FFT&B, Faculty of Forestry	
Social	ERSF, Teacher Education, Kinesiology	
Humanistic	Faculty of Humanities	Psychology, Anglistics, Croatistics, History
Art	Music Academy	

Sex: 37.9% M, 62.1% F; M_{age}=19.62 (SD=0.826)

$n_{1.\ year}$=292; $n_{2.\ year}$=146

Scientific Fields		Sex				Total	
		M		F			
		%	N	%	N	%	N
Science	Planned	3.0	12	8.5	34	11.5	46
	Collected	3.0	13	9.3	41	12.3	54
Technical	Planned	24.4	98	13.5	54	37.9	152
	Collected	20.5	90	14.4	63	34.9	153
Biomedical	Planned	2.3	9	10.0	40	12.3	49
	Collected	3.2	14	9.8	43	13.0	57
Biotechnical	Planned	2.4	10	4.5	18	6.9	28
	Collected	3.2	14	4.8	21	8.0	35
Social	Planned	3.5	14	15.1	61	18.6	75
	Collected	4.1	18	15.1	66	19.2	84
Humanistic	Planned	2.5	10	9.1	36	11.6	46
	Collected	3.2	14	8.0	35	11.2	49
Art	Planned	0.6	2	0.6	2	1.2	4
	Collected	0.7	3	0.7	3	1.4	6
Total	Planned	38.7	155	61.3	245	100.0	400
	Collected	37.9	166	62.1	272	100.0	438

Measures

- Self-Determination Scale (Sheldon & Deci, 1993, *SDS)*
- International Personality Item Pool – 50 item scale *(*IPIP50, 2001)
- Question on the lifetime cannabis consumption (number of days)

Self-Determination Scale

(Sheldon & Deci, 1993. - 10 items)

- Assess individual differences in the extent to which people tend to function in a self-determined way
- Two subscales: 1) Awareness of oneself, 2) Perceived choice in one's actions
- Statements are formulated as an opposite poles (as a semantic differential)
- Participant indicates the degree to which statement A feels true, relative to the degree that statement B feels true, on the 5-point scale
- The subscales can be combined in an overall SDS score (average score of 10 items)

- Cronbach $\alpha = .79$

IPIP50

(International Personality Item Pool – IPIP50, 2001 – 50 items)

- Measure personality traits: Extraversion, Agreeableness, Conscientiousness, Emotional Stability / Neuroticism, Intellect
- For each dimension 10 items
- For each statement participant chooses whether it is 1. Very Inaccurate or 5. Very Accurate as a description of oneself

- $\alpha_{extraversion} = .87$
- $\alpha_{conscientiousness} = .77$
- $\alpha_{neuroticism} = .84$

Results

Descriptive analysis

Variables			Gender		t	Cohen d	Total
			M	F			
Self-Determination		M	3.92	3.83	1.37	0.14	3.86
		SD	.601	.672			.646
Personality traits	Extraversion	M	31.96	34.24	-2.94**	-0.30	33.38
		SD	8.387	6.944			7.593
	Conscientiousness	M	36.55	36.90	-.58	-0.06	36.77
		SD	5.994	6.291			6.176
	Neuroticism	M	26.18	30.27	-6.21**	-0.60	28.72
		SD	6.245	7.350			7.224

- No significant differences in cannabis consumption among M & F (U=21574.00; Z=-.67; p>.05; r=-.03); nor between students of the 1st and 2nd year (U=20208.50; Z=-.70; p>.05; r=-0.03).

Descriptive analysis

Prevalance of cannabis consumption:
LTP: 27.5%, LYP:17%; LMP: 7.1%

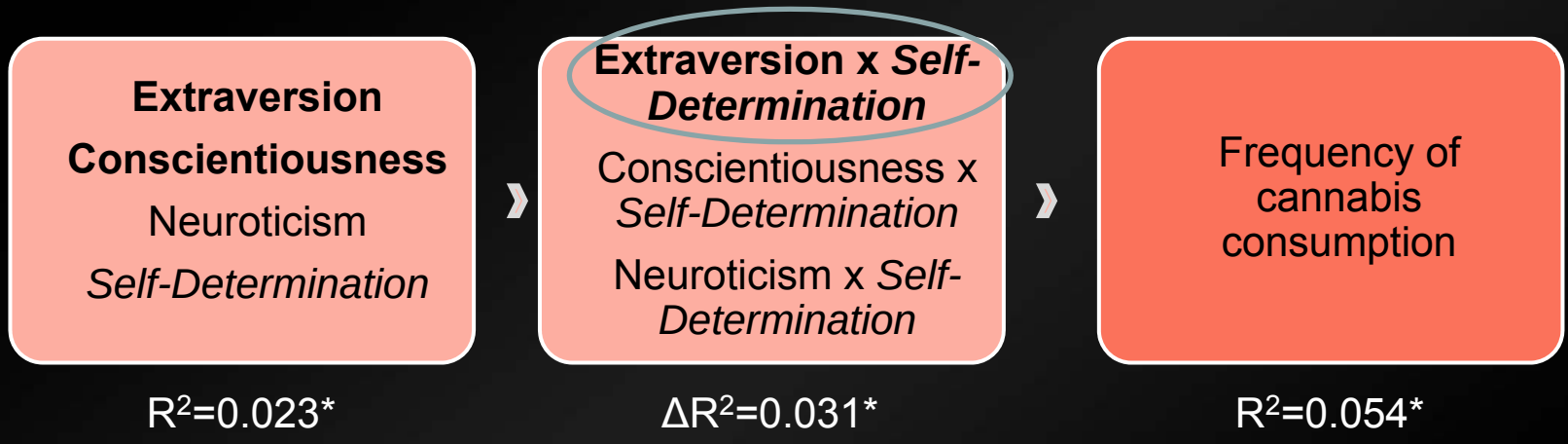
Correlations between Self-Determination, personality traits & cannabis consumption

Variables	1.	2.	3.	4.	5.
1.*Self-Determination*	1				
2.Extraversion	.33**	1			
3.Conscientiousness	.23**	.10*	1		
4.Neuroticism	-.39**	-.18**	-.21**	1	
5.Cannabis consumption	-.00	.09	-.09	-.05	1

* $p<.05$; ** $p<.01$; *italic* – transformed variables

Moderation effects?

Hierarchical regression analysis



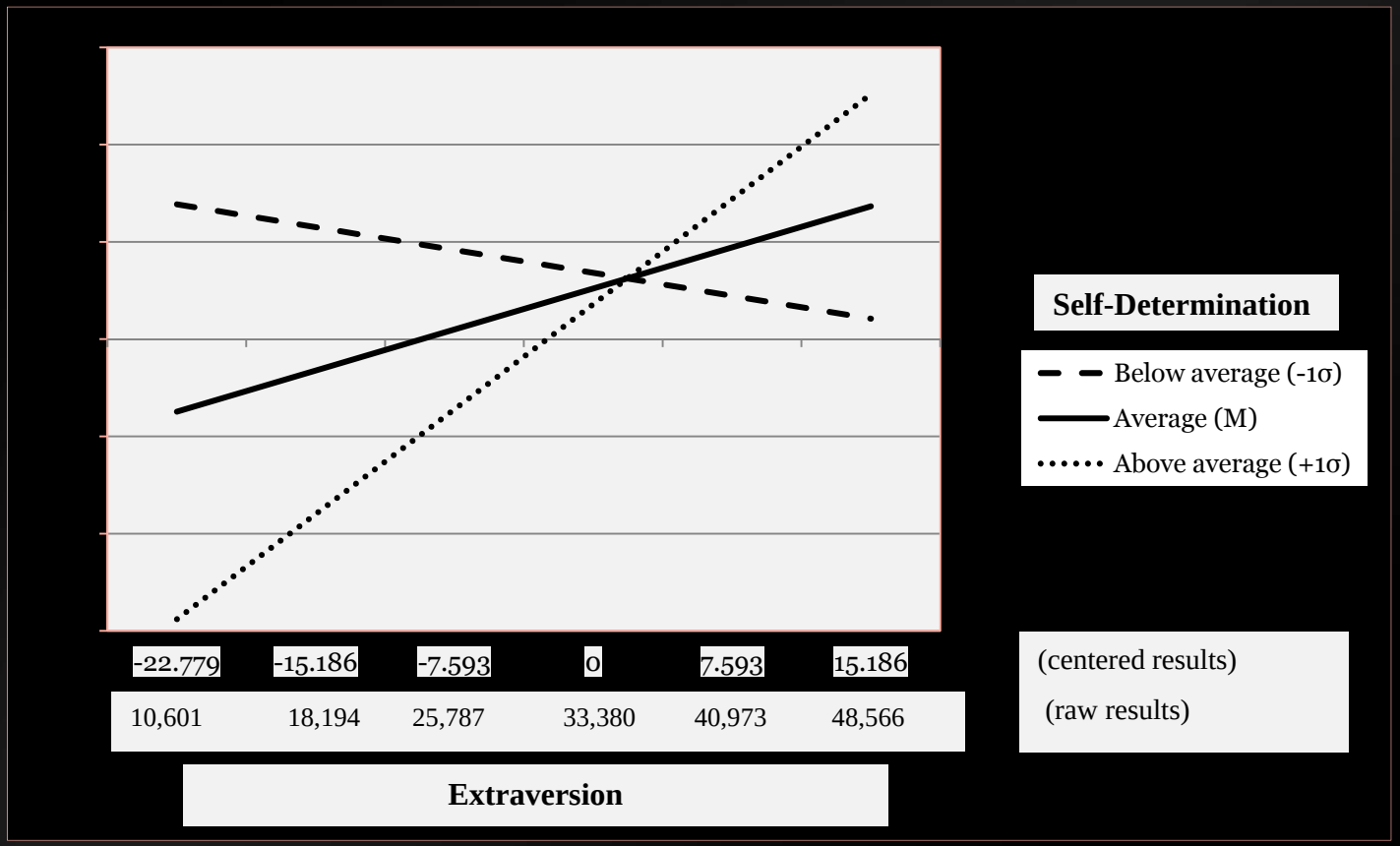
Moderation effect of Self-Determination between personality traits and cannabis consumption

- Average Self-Determination and average Extraversion: consumed cannabis 5.21 days (b_0=5.209)
- Increase in Extraversion for 1 score → increase in cannabis consumption for half of the day (b_1=.556)
- High Self-Determination (Z=+1SD): increase in Extraversion for 1 score → increase in cannabis consumption for almost 1.5 day (b_1=1.426)
- Although: small effect size!

Effect of Extraversion on the frequency of cannabis consumption is higher among students with higher Self-Determination!

Moderation effect of Self-Determination between personality traits and cannabis consumption

Criterion: frequency of cannabis consumption



Hypothesis ☑☒

Conclusion

- Interaction of Self-Determination & Extraversion → risk factor for cannabis consumption
- Students that function well are not necessarily sufficiently equipped for life challenges (Pittman et al. 2003).
- Focus on protective factors!

Limitations & contribution

Limitations & contribution

- ✗ Correlational design
- ✗ Self-report
- ✗ Quota sample
- ✗ Small % of explained variance
- ✗ Operationalization of the outcome
- ✗ Some other important variables were not included

- ✓ SDT construct tested in the context of cannabis consumption
- ✓ Translation of the SDS to Croatian
- ✓ Operationalization of the Self-Determination (usually as Causality Orientations)
- ✓ Interaction of Self-Determination & Extraversion: risk factor for cannabis consumption
- ✓ Direction in which prevention interventions should (not) be planned

Thank you for your attention!

Questions?

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