

Mediation of Personality Risk by Cognitions

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Introduction

- Previous research has identified a variety of substance use risk factors including intrapersonal traits such as impulsivity and other personality traits (Hartzler & Fromme, 2003), as well as interpersonal traits and cognitions (Leventhal & Schmitz, 2006).
- There have been promising results regarding the effectiveness of personality-targeted interventions in adolescents focusing on the personality traits of impulsivity, sensation seeking, negative thinking, and anxiety sensitivity (Newton et al., 2016).
- Associative cognitions have been found to be predictors of drug use in both adolescents and adults (Stacey, Ames, Sussman & Dent, 1996).
- Cognitions such as alcohol related memory associations have a mediational role in the risk-substance use relationship (Van der Vorst et al., 2012).
- An increased understanding of the role of automatic cognitions in the risk-outcome relationship between personality and substance use — specifically with regards to adolescent use — has important implications for prevention and delay of onset of use and as well as intervention.

Hypotheses

- 1.The relationship between personality risk and cannabis and alcohol use will be mediated by cognitions.
- 2.Individuals in the negative thinking, impulsivity, and sensation seeking risk groups will have increased alcohol and cannabis use compared to individuals in the low risk group.
- 3.Individuals in the anxiety sensitivity risk group will not have increased alcohol and cannabis usage compared to the low risk group.

Measures

Risk Level

- The high risk group was composed of adolescents who scored high in the personality traits impulsivity, negative thinking, anxiety sensitivity, or sensation seeking. The low risk group consisted of individuals who did not score high in any of the high risk personality traits.

Cognitive Measures

- Direct automatic cognitions were measured through outcome expectancy liking task measuring drug use outcome expectancy liking — which is a rating of the anticipated affective consequences of drug use (Fulton et al., 2012).
- Indirect automatic cognitions were measured through word-pair association tasks measuring behavioral associations.

Marijuana and Alcohol Use

- Marijuana and alcohol use was defined as answering yes to whether or not adolescents had “drank alcohol”, “got drunk”, or “used marijuana in the past year”.

Results

Effects of Risk and Personality Group on Use

	Risk group			Personality group		
	Low	High	AS	IMP	NT	SS
Drank Alcohol	6.6%	15.2%**	4.5%	23.1%**	20.8%**	13.3%
Got Drunk	1.6%	11.0%**	0.0%	17.9%**	20.8%**	6.7%
		*		*	*	
Used Marijuana	2.0%	11.0%**	0.0%	12.8%**	12.5%**	16.7%**
		*				*

Differs from low risk group * p< .05, ** p<.01,, *** p<.001; Bonferroni corrected
Table 1: Past year use as a function of risk group and assigned risk group.

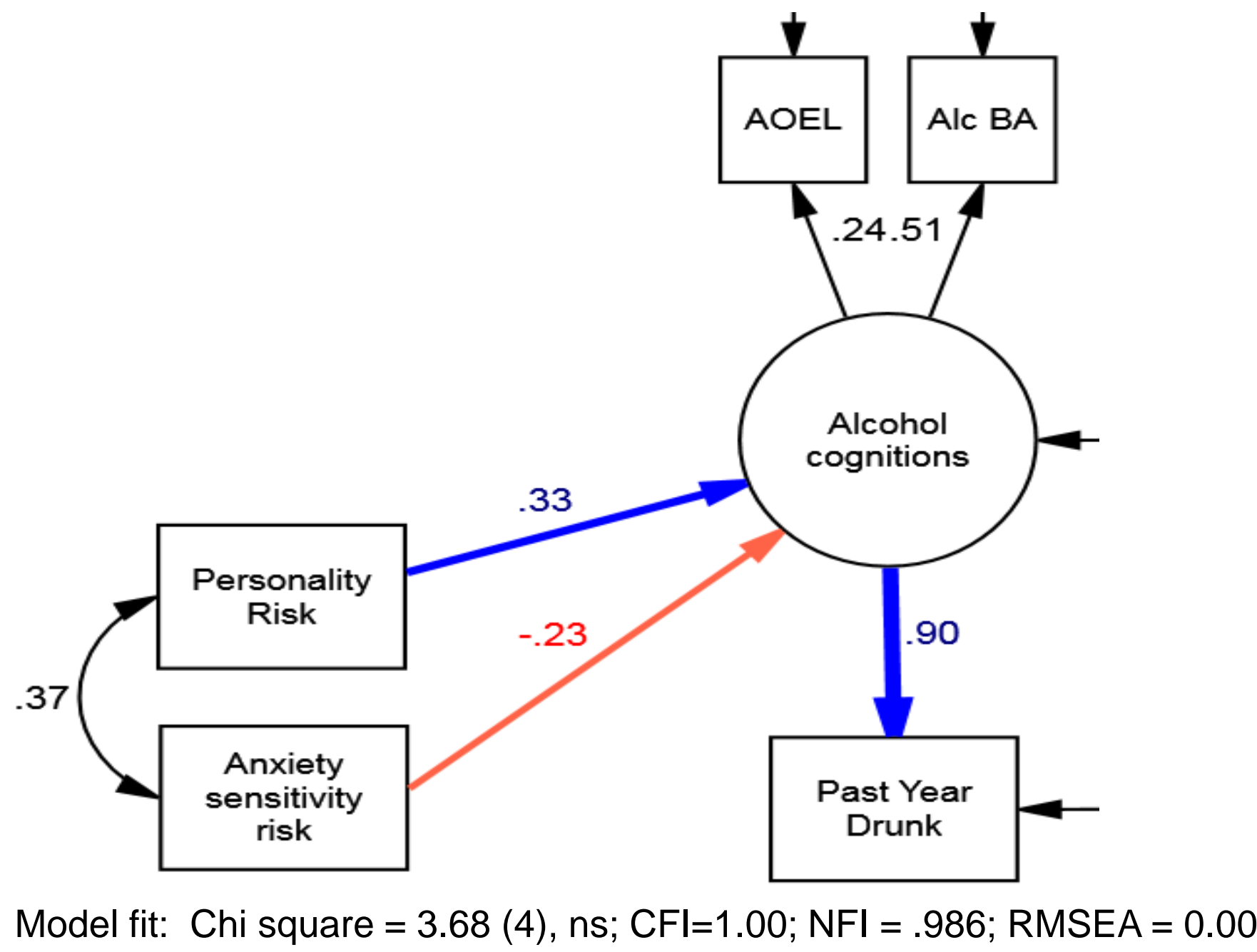
Cognitive effects of Risk and Personality Group

	Risk group		Personality Group			
	Low	High	AS	IMP	NT	SS
Alcohol behavioral associates	.10	.22	.09	.36*	.17	.27
Alcohol outcome expectancy liking	-1.05	-.80*	-1.12	-.48**	-.71	-.86
Marijuana behavioral associates	.02	.48**	.07	.85**	.13	.82***
Marijuana outcome expectancy liking	-1.20	-.70***	-1.30	-.36***	-.54**	-.62**

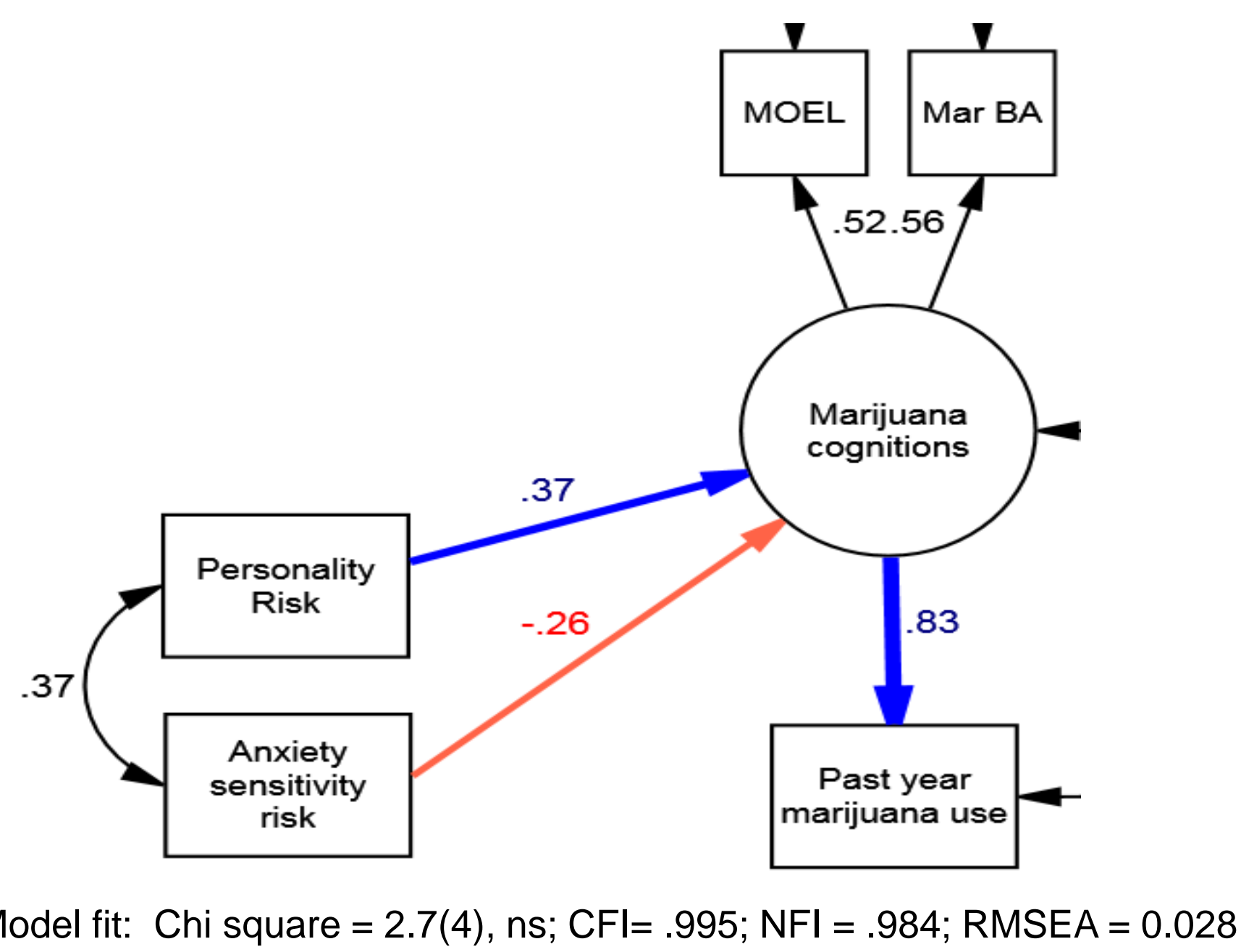
Differs from low risk group * p< .05, ** p<.01,, *** p<.001; Bonferroni corrected

Table 2: Means values of cognitive measures as a function of risk group and assigned risk group

Mediational Model for Alcohol Use



Mediational Model for Marijuana Use



Conclusions

- Cognitions mediate the relationship between personality risk and marijuana and alcohol use
- The personality risk groups negative thinking, impulsivity and sensation seeking are related to higher marijuana and alcohol use.
- There was no significant difference between the anxiety sensitivity risk group and the low risk group with respect to alcohol and marijuana use.

Limitations

- Low generalizability of results due to sample.
- The dichotomous nature of the definition of “use” as having used marijuana or drank alcohol in the past year does not differentiate adolescents who used on numerous occasions between those who only used once.
- Self-report nature of assessment may have led to response bias.

References

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