

Reconceptualizing efficacy: Response efficacy and drug resistant self-efficacy in adolescent substance use

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Abstract

Objectives: To develop a new measure of response efficacy (RE) and self efficacy (SE) for drug offer refusals and demonstrate the role they play in drug use for youths .

Methods: The efficacy scale was developed and administered as part of larger survey on a sample of 3,310 7th graders students in 39 rural secondary schools located in Pennsylvania and Ohio.

Results: Exploratory factor analysis and confirmatory factor analysis of a 12-item efficacy scale yielded a three-factor solution: response efficacy (RE), alcohol-resistant self-efficacy (ARSE), and marijuana-resistant self-efficacy (MRSE). RE and ARSE/MRSE were negatively related to alcohol use and marijuana use, respectively, whereas MRSE was only positively associated with alcohol use.

Conclusion: Drug prevention programs should reinforce substance-specific self-efficacy and address response efficacy.

Background

- The extended parallel process model (EPPM, Witte, 1994) and protection motivation theory (PMT, Rogers, 1983) propose two types of efficacy influence health behaviors: 1) perceived response efficacy and 2) perceived self-efficacy.
- Self-efficacy (SE) refers to the belief in one's ability to perform a behavior (Bandura, 1977).
- Response efficacy (RE) refers to the perceived effectiveness of potential responses to a threat (Roger, 1975, Witte, 1994).
- The study of drug offer refusals and substance use prevention has rarely considered both.

Methods

❖ **Data collection:** Three-forms survey design in 2009

❖ **N = 3310** (F: 49%, White: 87%, average age: 12. 3 yrs, 7th grade) in 39 rural PA & OH schools

❖ **Measurement**

➤ **Response efficacy:** Four items derived and modified from Witte, Cameron, McKeon, and Berkowitz (1996)

(i.e., "offering an explanation would be an effective way to resist alcohol and other substance use.")

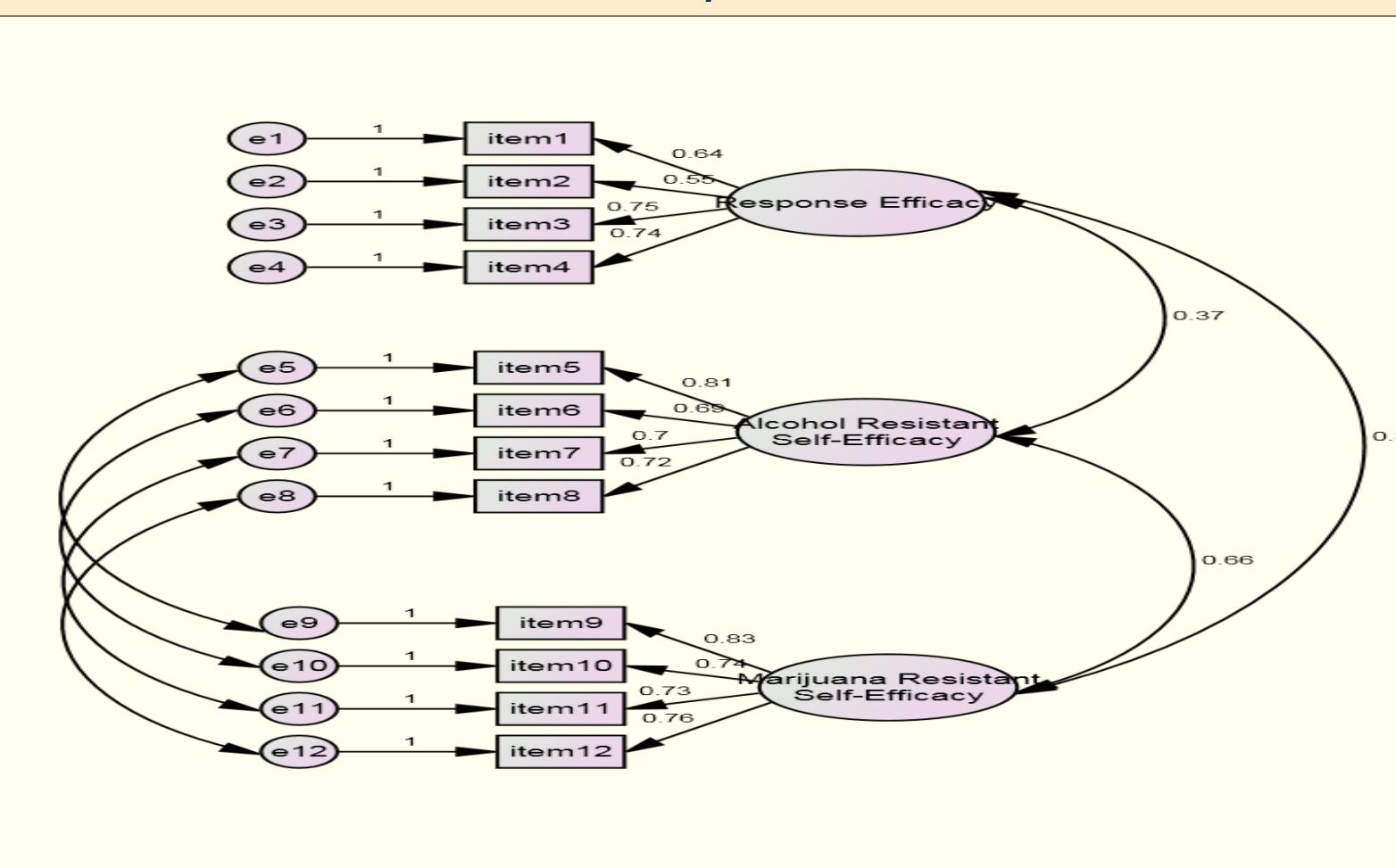
➤ **Alcohol/Marijuana-resistant self-efficacy:** Four items for ARSE and for MRSE, respectively

(e.g., "Suppose someone you know offered you a drink of alcohol (some marijuana), and you did not want it. How easy would it be for you to refuse it, to explain why you didn't want it, to avoid the situation in the first place, and to just to leave the situation?")

➤ **Alcohol/Marijuana use :** Cumulative lifetime consumption for alcohol, and marijuana use during the 30 days prior to the survey

Results

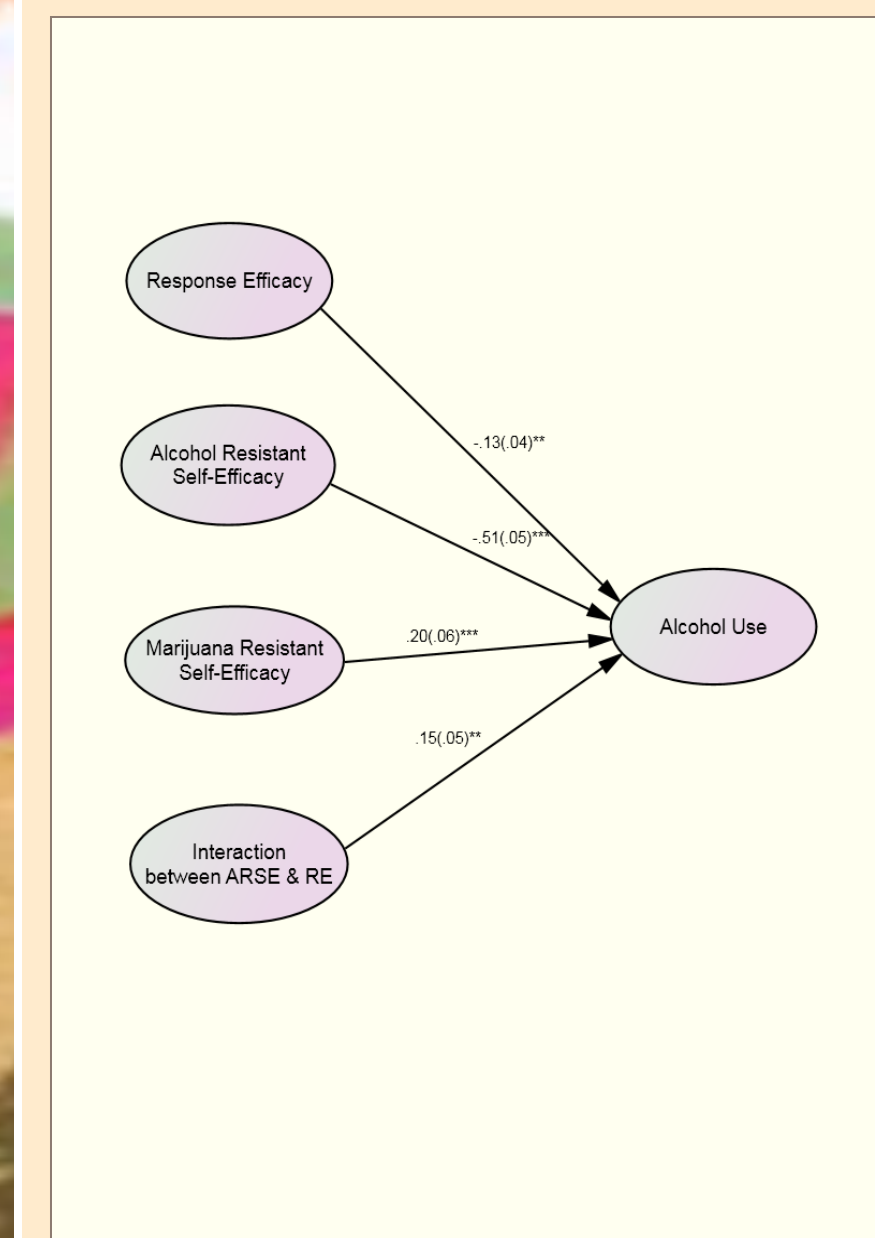
Figure1. Factor structure of efficacy



$\chi^2(47) = 336.2, p < .001, RMSEA = 0.054, NFI = 0.966, CFI = 0.976$
Note. NFI: Non-Normed Fit Index, CFI: Comparative Fit Index, RMSEA: Root Mean Square Error of Approximation

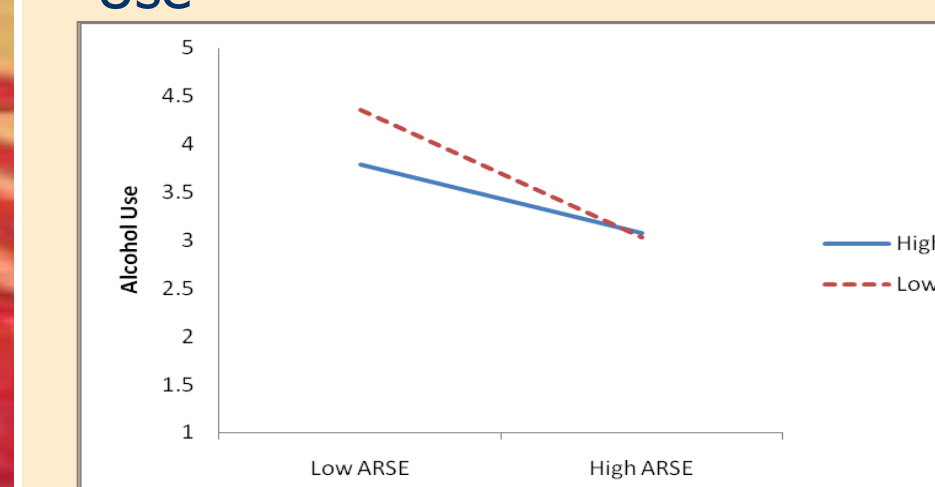
Results

Figure2. The relationship between efficacies and alcohol use



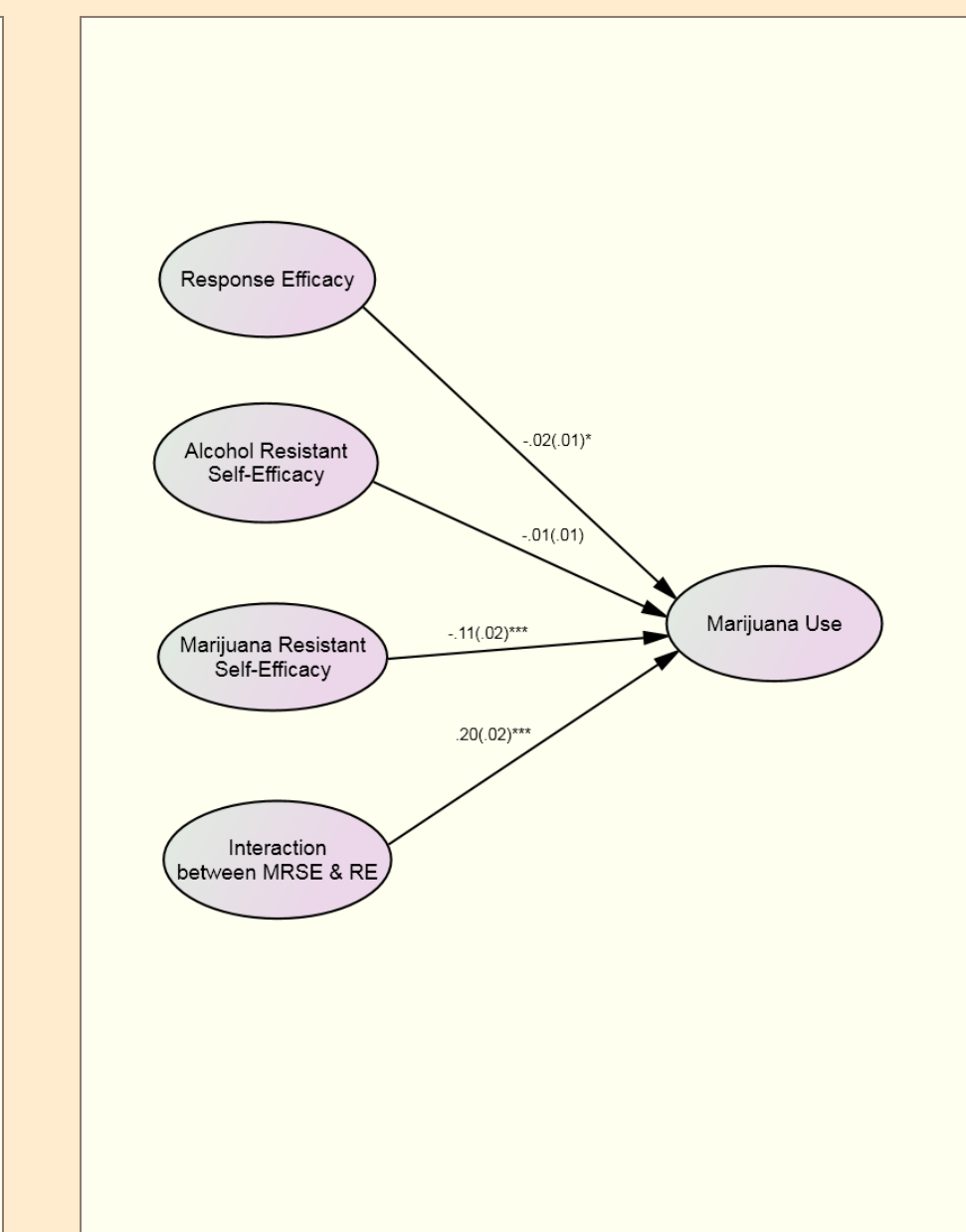
$\chi^2(401) = 1601.7, CFI = .966, NFI = .961, RMSEA = .038$

Figure 4. The Interactive Effect of Response Efficacy and Alcohol Resistant Self-efficacy on Alcohol Use



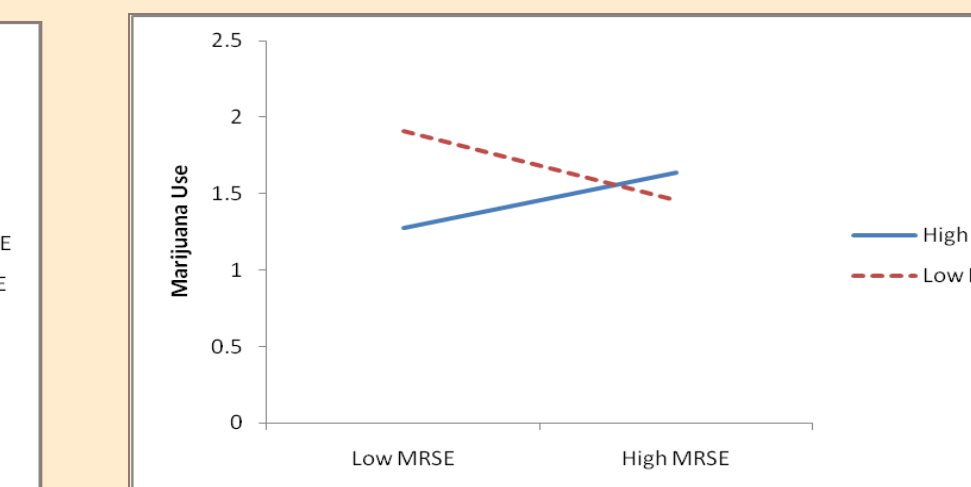
Note. RE: Response efficacy, ARSE: Alcohol resistant self-efficacy

Figure3. The relationship between efficacies and marijuana use



$\chi^2(401) = 1563.4, CFI = .972, NFI = .968, RMSEA = .037$

Figure5. The Interactive Effect of Response Efficacy and Marijuana Resistant Self-efficacy on Marijuana Use



Note. RE: Response efficacy, MRSE: Marijuana resistant self-efficacy

Discussion

- Multidimensionality of efficacy : Response efficacy, Alcohol/Marijuana-resistant self-efficacy
- Importance of domain-specific self-efficacy in spite of associations among self-efficacies across relevant domains (Carpenter & Howard, 2009; Bandura, 2006)
- Response efficacy : Protective factor for individuals with low levels of alcohol/marijuana-resistant self-efficacy
- Limitation and future study : Lack of generalization & Need to study cigarette-resistant self-efficacy

Reference

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Acknowledgement

This project was supported by Award Number R01DA021670 from the National Institute on Drug Abuse. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse or the National Institutes of Health.