

Thinking About The Future As A Substance Use Prevention Strategy: The Role Of Positive Future Orientation On Adolescent Substance Use Intentions And Behaviors.

Sarah A. Stoddard, PhD

April 3, 2017

Alcohol and Marijuana Use Among Adolescents

- 66% of 9th-12th grade students report at least one drink of alcohol in their lifetime.
- 41% of students report ever using marijuana in their lifetime.
- Perceived risk of marijuana use has declined.
- Perceptions of AOD use associated with use.



(Kann et al., 2014; Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2015).

Background and Theory

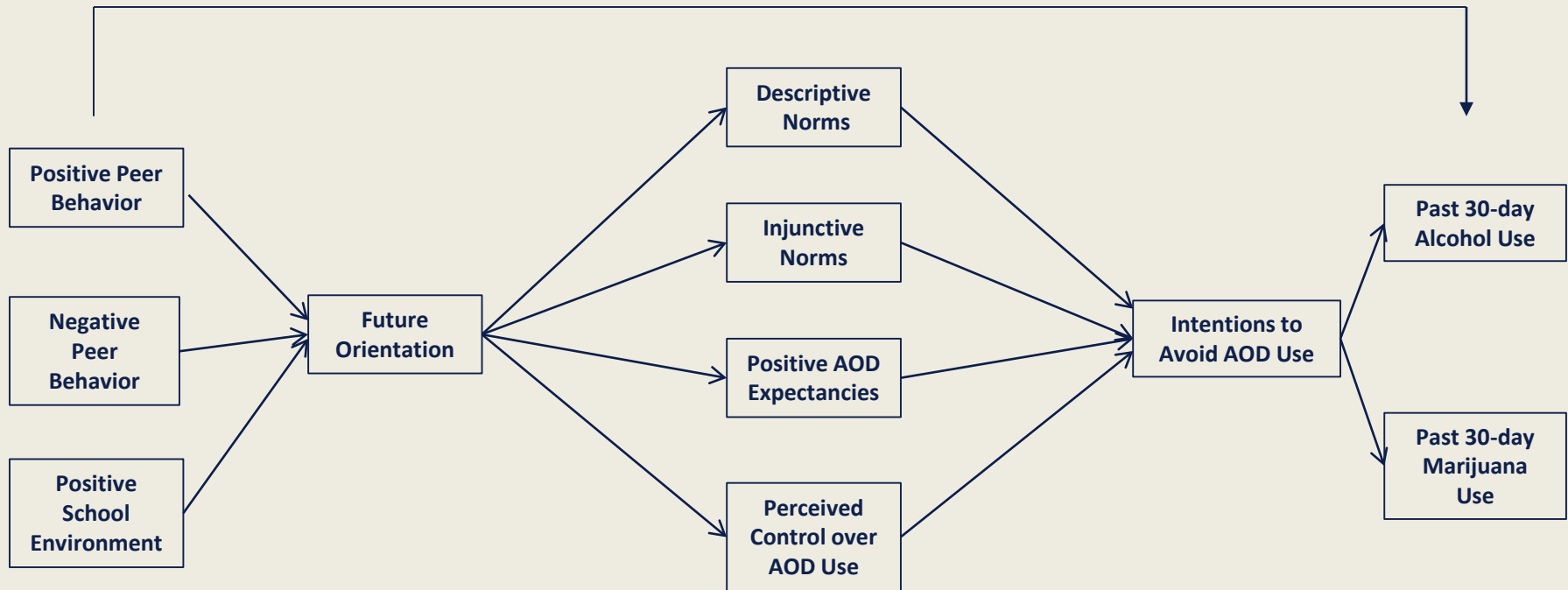


- **Reasoned Action Approach** (Fishbein & Ajzen, 2010)
- **Contextual influences impact behavior** (Fishbein & Ajzen, 2010; Petraitis, Flay & Miller, 1995)
 - **Peers** (Brechwald & Prinstein, 2011; Pratt et al., 2010; Vogel, Rees, McCuddy, & Carson, 2015).
 - **School Environment** (Bonell et al., 2013)
- **Positive Future Orientation** (Carvajal et al., 2002; Steiger, Stoddard & Pierce, 2016)

Purpose

- Examine the direct and indirect effects of positive and negative peer influence and school environment on AOD use intentions and self-reported past 30-day alcohol and marijuana use via future orientation and perceptions of AOD use.

Hypothesized Model



Sample and Method

- 9th-12th grade students attending one high school in the Midwestern US.
 - Study sample: $n = 392$
 - Mean age = 15.35, SD = 1.21
 - 49% Male; 73% White
- Paper-and-pencil survey administered in homeroom class in Fall 2014
- Parental opt-out consent/student assent
- 86% participation rate

Measures

Outcomes

- Past 30 day alcohol use
- Past 30 day marijuana use

Perceptions of AOD use and Intentions

- Positive AOD Expectancies (6 items)
(example item: *Drinking alcohol makes the future seem brighter*)
- Descriptive Norms (6 items)
(i.e., perceptions of other students' use)
- Injunctive Norms (6 items)
(i.e., how wrong they think their friends feel AOD use would be)
- Perceived Control Over AOD Use (4 items)
(example item: *I believe I have the ability to avoid alcohol*)
- Intentions to Avoid AOD use (2 items)

Measures

Contextual Factors

- Positive School Environment (5 items)
- Positive Peer Behavior (4 items)
- Negative Peer Behavior (8 items)

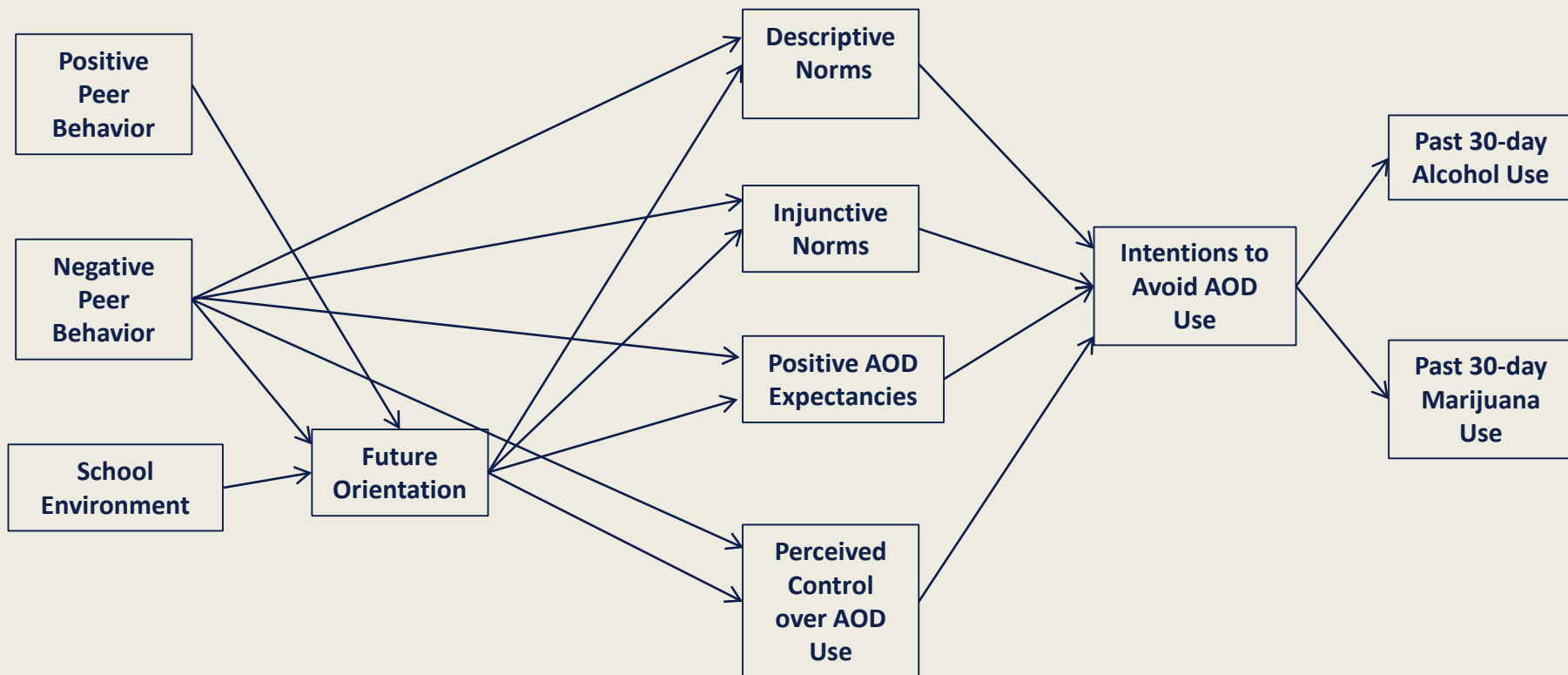
Future orientation

- Purpose (4 items)
- Hope (8 items)
- Future Expectations (6 items)
- Perceived Control Over Future (5 items)
- Items averaged for each scale, then mean scores were summed (Range: 4-16)

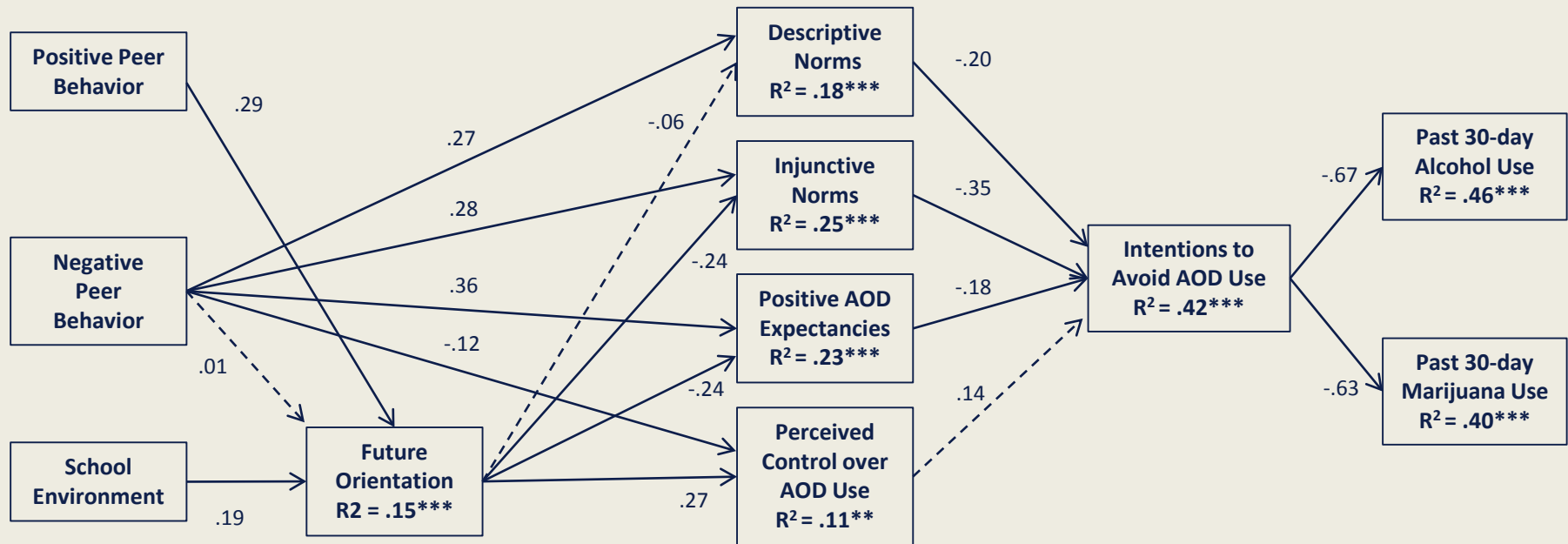
Analysis

- Structural equation modeling in Mplus 7.0
- Expectation maximization (EM) estimation used for missing data on endogenous variables
- Maximum likelihood (ML) estimation with 500 bootstrap samples
- Model fit indices:
 - Comparative fit index (CFI)
 - Tucker-Lewis index (TLI)
 - Root mean square error of approximation (RMSEA) with 90% confidence interval
- Path estimates evaluated using unstandardized 95% CIs

Final Model

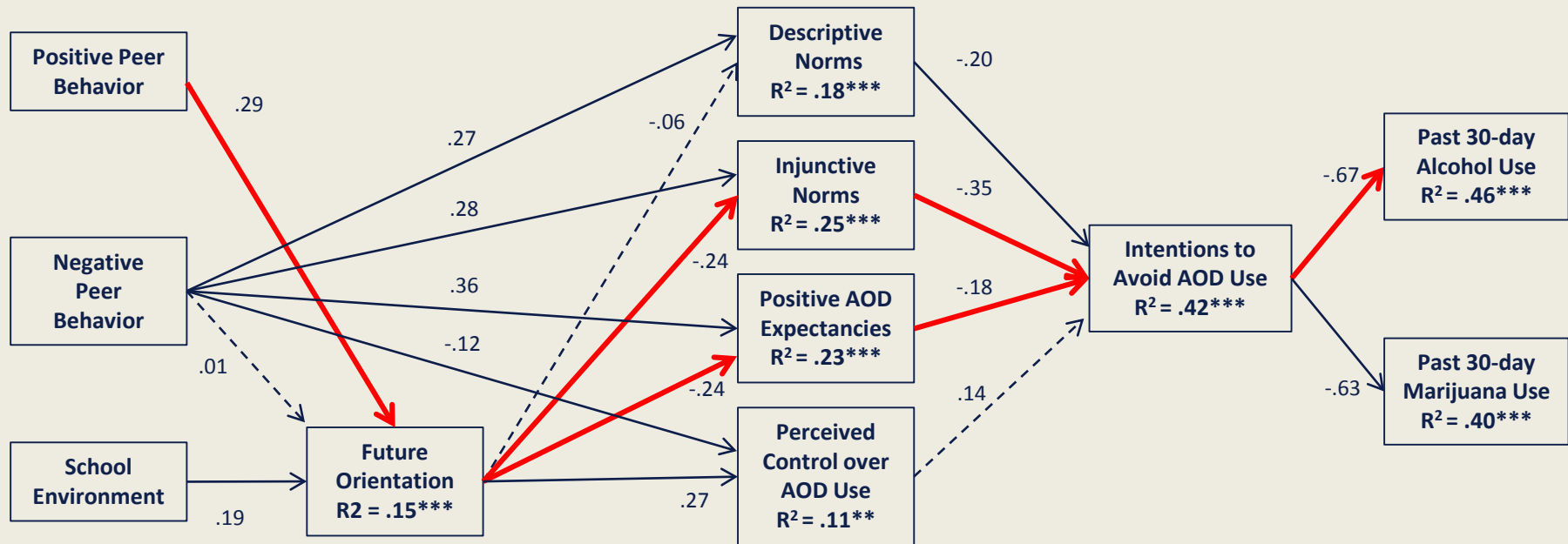


Results: Direct Effects



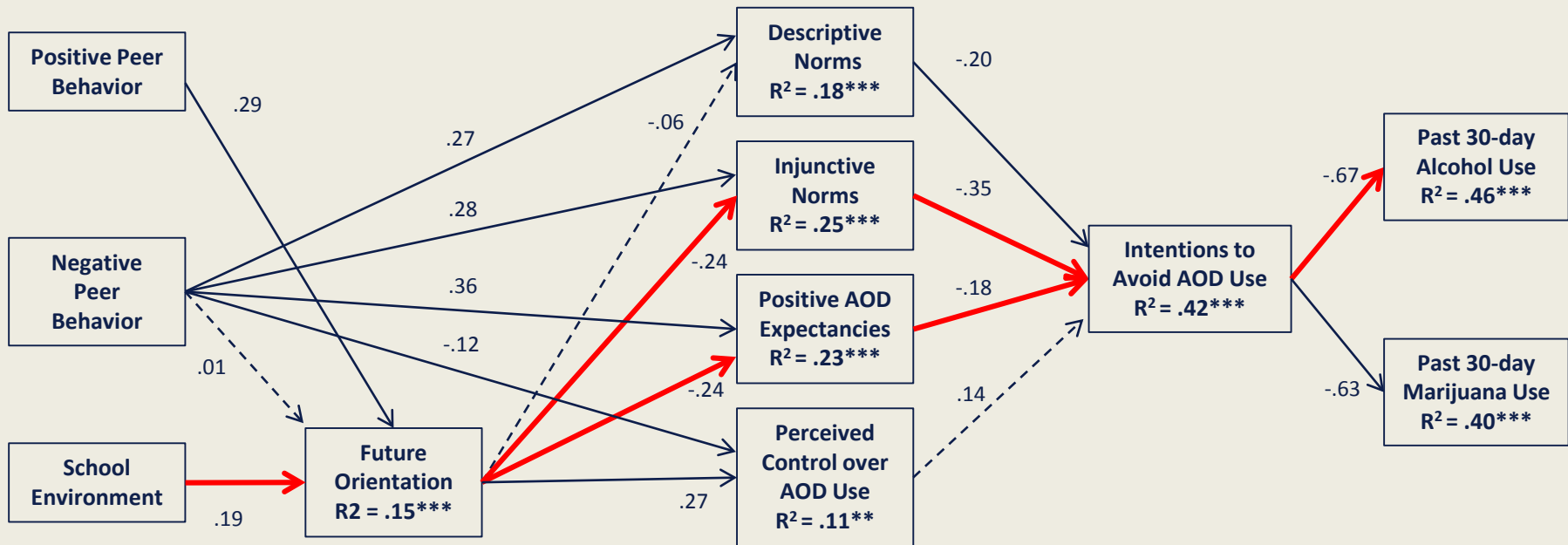
Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of Positive Peers on Alcohol Use



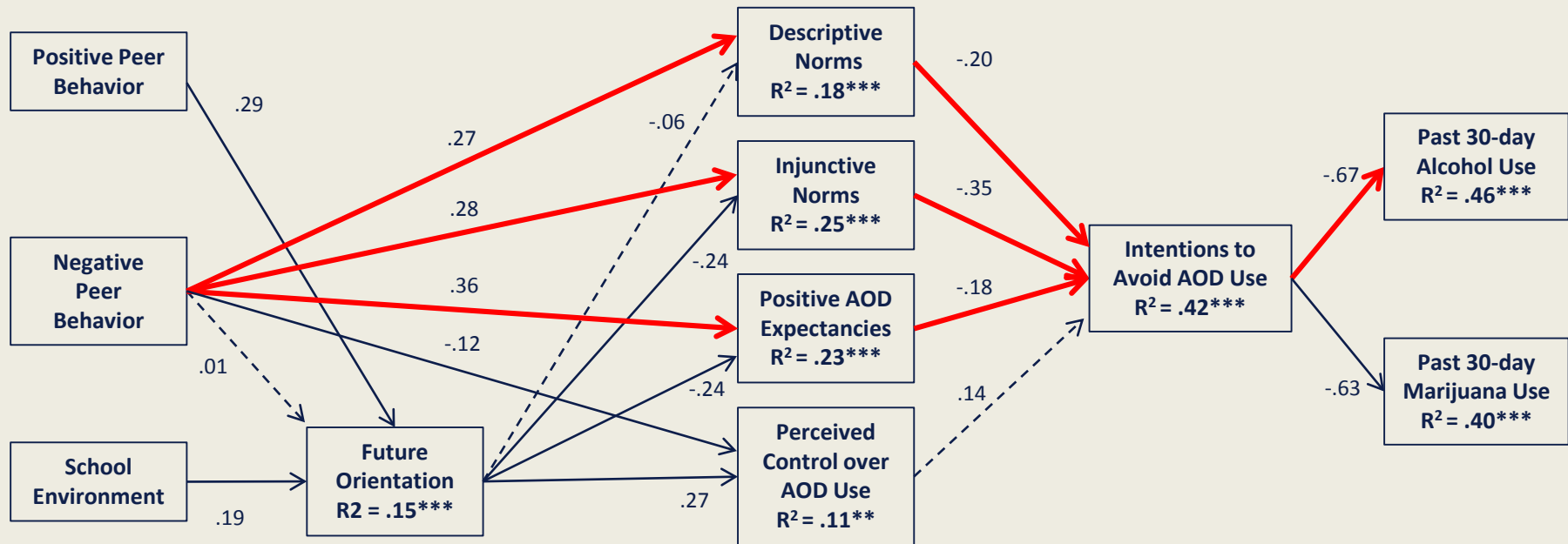
Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of School Environment on Alcohol Use



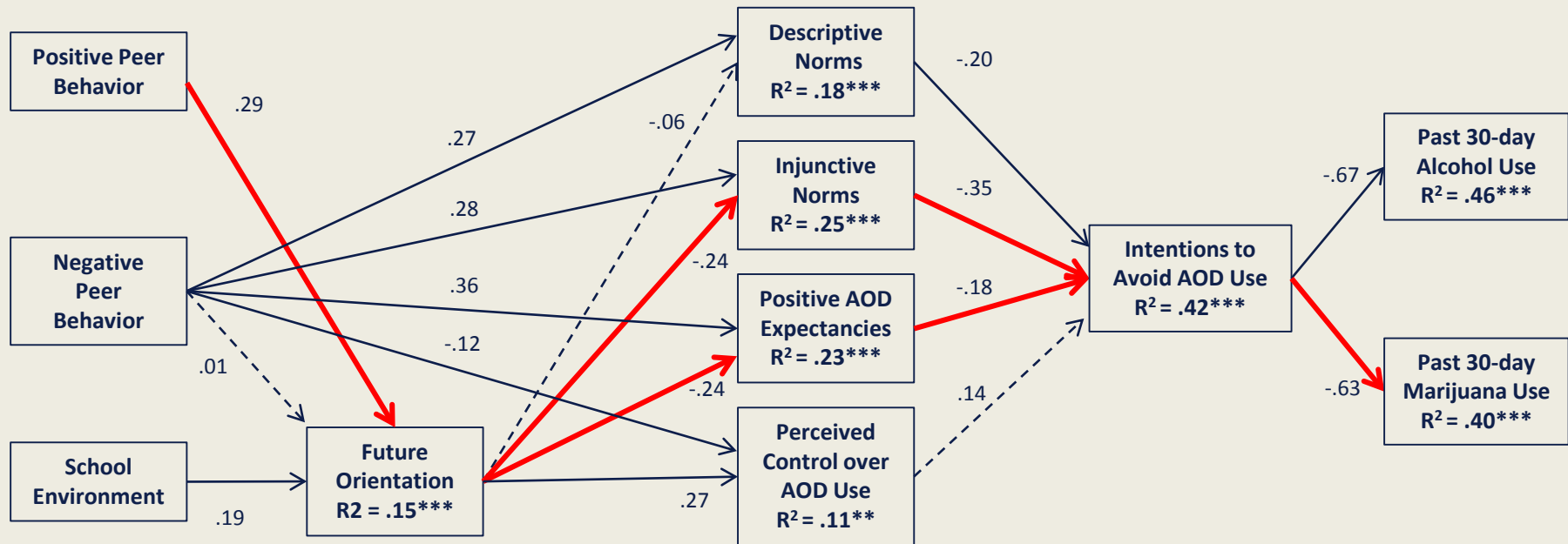
Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of Negative Peers on Alcohol Use



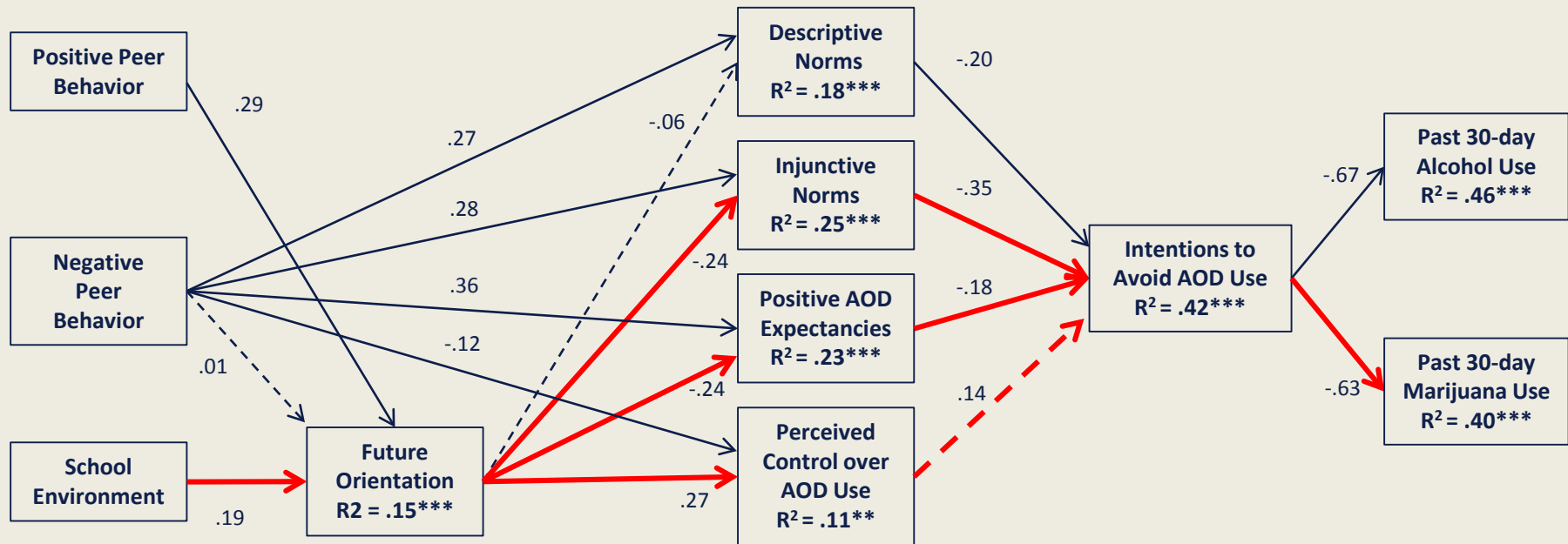
Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of Positive Peers on Marijuana Use



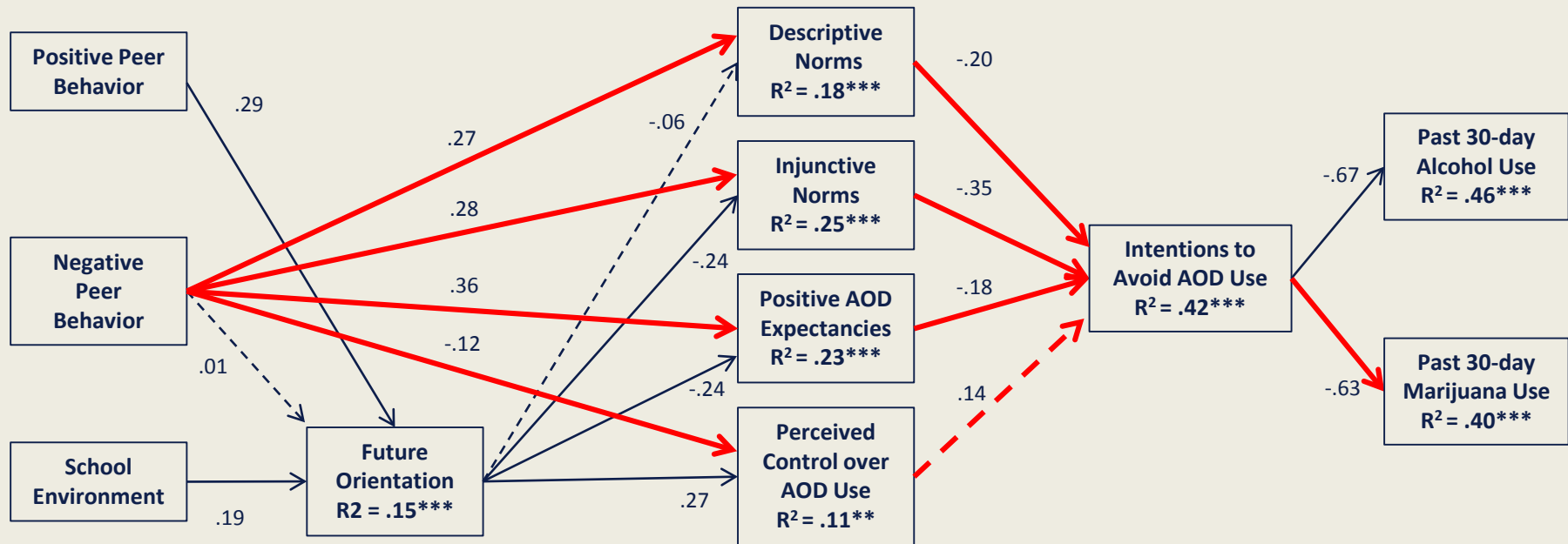
Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of School Environment on Marijuana Use



Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Results: Indirect Effects of Negative Peers on Marijuana Use



Bootstrapped final modified model with covariate adjustments. Model fit: $\chi^2(41) = 85.40$, $p < .001$; CFI = .95; TLI = .92; RMSEA = .05, 90% CI [.04, .07]; SRMR = .05.

Conclusions

- Importance of future orientation as a pipeline for the impact of positive school environment
- Peer influence on norms and expectancies of AOD use



References: Molnar, Cerda, Roberts, & Buka, 2008
Picture: <http://www.appletonparkandrec.org/>

Limitations

- Cross sectional design
- Single school sample
- Self-reported contextual measures

Acknowledgments

- Stoddard, S.A. & Pierce, J. (in press). Alcohol and marijuana use and intentions among adolescents: The role of the Reasoned Action Approach and positive future orientation. *Youth & Society*.
- Dr. Stoddard is supported by a Mentored Scientist Career Development Award (1K01 DA 034765) from the National Institute of Drug Abuse. Views expressed in this presentation do not necessarily represent the views of the funding agencies.
- Thank you to participating students, school faculty, and staff.

For more information:

- Visit us at <http://pathways4youth.org>
- Email: sastodda@umich.edu or researchteam@pathways4youth.org

