



# Brief Alcohol Interventions for Adolescents and Young Adults: A Systematic Review and Meta-Analysis

Emily E. Tanner-Smith

Mark W. Lipsey

Katarzyna T. Steinka-Fry

INEBRIA Conference

September 19<sup>th</sup>, 2014



## Background

- Brief interventions are an attractive, potentially cost-effective way to address the issue of excessive alcohol use among youth.
- There is a growing body of well-controlled research studies examining the effectiveness of brief alcohol interventions for *adolescents and emerging adults*.
- Prior meta-analyses have documented the effectiveness of brief interventions for reducing alcohol among youth (Carey et al., 2007; Tait & Hulse, 2003).
- Few reviews have focused on for whom and under what conditions brief interventions are most/least effective.



# Research Questions

1. What are the overall effects of brief alcohol interventions on adolescent and emerging adults' alcohol use?
2. Are these interventions more or less effective for certain types of youth?
3. Are these interventions more or less effective in certain settings, dosages, or modes of delivery?
4. Do these effects persist or desist over time?



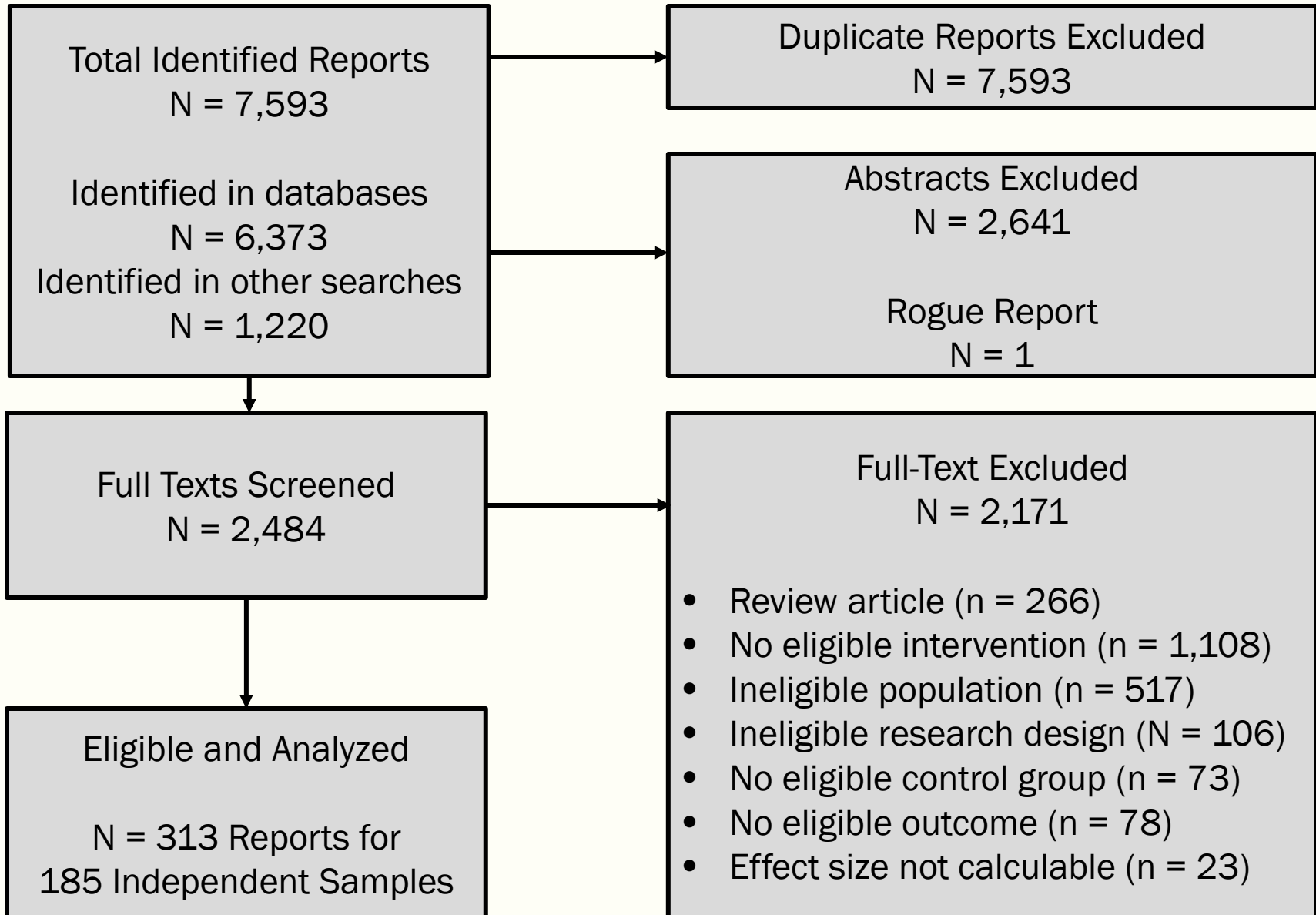
## Methods: Eligibility Criteria

- Experimental or controlled quasi-experimental research studies comparing:
  - Brief intervention aimed at reducing alcohol use, ranging from 1-minute to 5-hours of total contact time
  - No treatment, straw-man, sham, or treatment as usual comparison condition
- Report at least one eligible outcome for adolescents or young adults (ages 12-25, or undergraduates up to age 30)
- Reported in 1980 or later



## Methods: Data Collection & Analysis

- Comprehensive literature of over 29 electronic databases, hand-searches of journals, reference harvesting, and contact with researchers
- Duplicate data extraction
- Standardized mean difference effect size (Hedges'  $g$ ) to quantify post-intervention differences in :
  - Alcohol consumption
  - Alcohol-related problems/consequences
- Meta-regression models with robust variance estimates used in all analyses (Hedges et al., 2010)



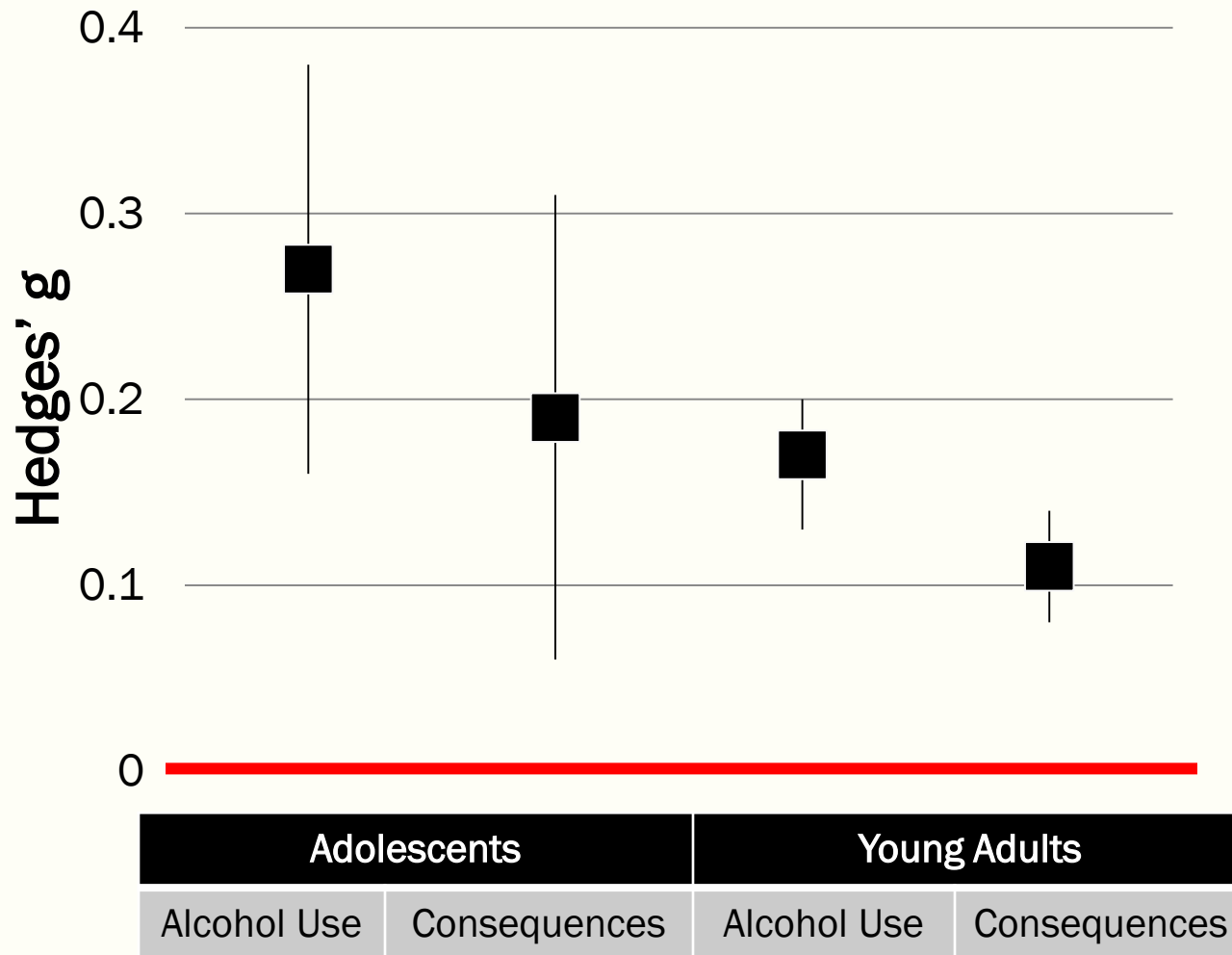
## Characteristics of Included Studies

	Adolescents <i>k</i> = 24 <i>n</i> = 172	Young Adults <i>k</i> = 161 <i>n</i> = 1,691
U.S. sample	50%	81%
Journal article	71%	75%
RCT design	79%	90%
Attrition; M (SD)	.12 (.14)	.23 (.19)
Average age; M (SD)	15 (1.5)	20 (1.7)
Percent male; M (SD)	.53 (.17)	.47 (.19)
High-risk screened sample	29%	52%
Number of sessions; M (SD)	1.8 (1.2)	1.3 (1.0)
Total days covered; M (SD)	6.2 (9.4)	2.9 (5.4)

*k* = number of study samples; *n* = number of effect sizes.



## Overall Effects: Mean Effect Sizes and 95% CIs







## Variability in Effects: Participant Characteristics

- For both age groups and outcome types, no consistent evidence that effects varied significantly across:
  - Race composition
  - Gender composition
  - Average age
  - High-risk screened samples



## Variability in Effects: Intervention Characteristics

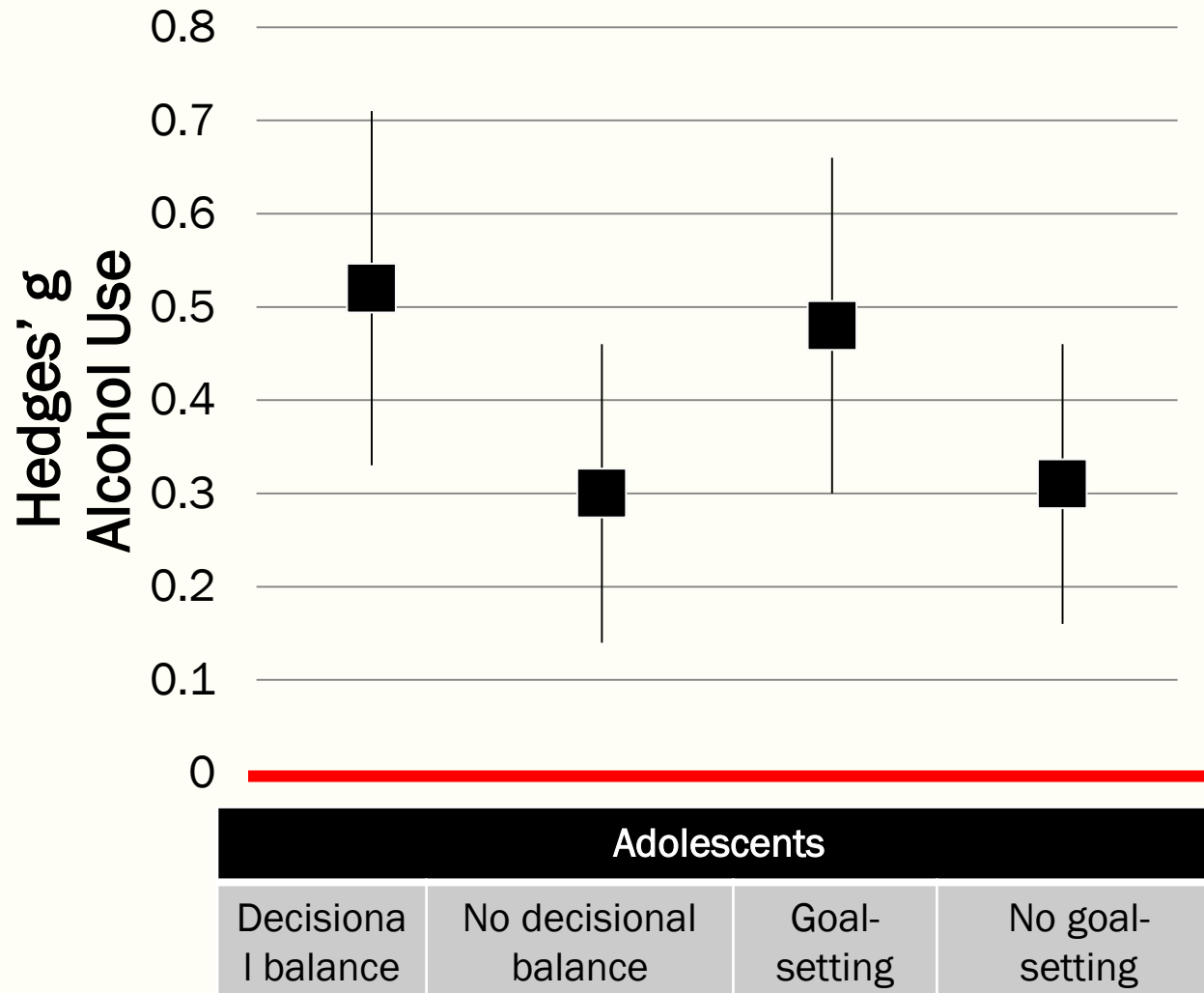
- For both age groups and outcome types, no consistent evidence that effects varied significantly across:
  - Modality
    - 21<sup>st</sup> birthday cards, CBT, MET, CBT/MET, expectancy challenge, personalized feedback reports, PET
  - Delivery site
    - Primary care/health center, emergency room, high-school, university, self-administered
  - Format
    - Self-administered, individual, group
  - Length

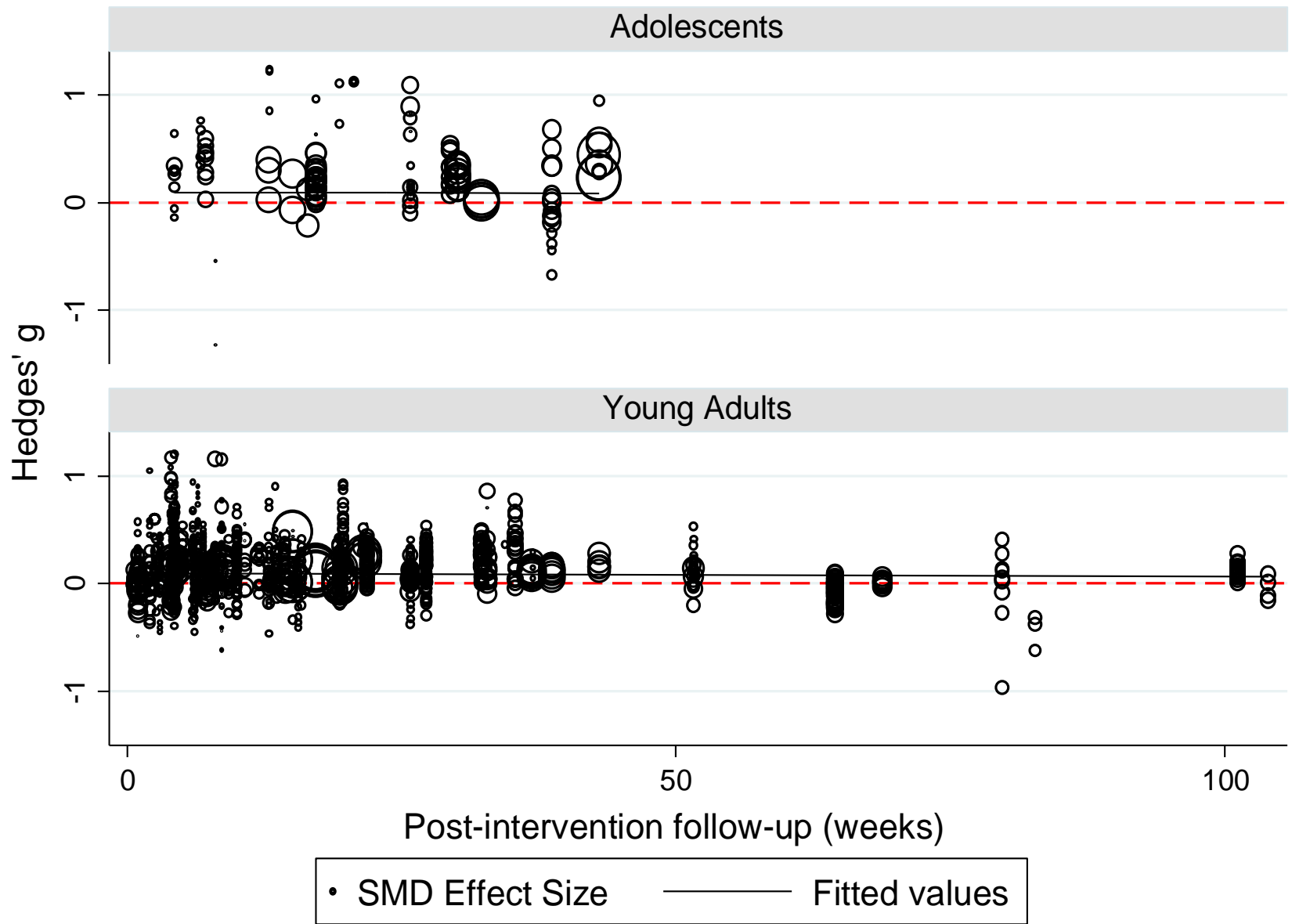


## Variability in Effects: Intervention Characteristics

- For young adults, no evidence that effects varied significantly according to the presence/absence of therapeutic components:
  - BAC information
  - Calorie information
  - Decisional balance exercise
  - Education, generic alcohol information
  - Feedback, personalized
  - Feedback, gender-specific
  - Goal-setting exercise
  - Money/cost information
  - Normative referencing

## Variability in Effects: Intervention Characteristics







## Conclusions

- Meta-analysis of findings from 185 experimental and controlled quasi-experimental studies indicates modest benefits of brief alcohol interventions for youth
  - Equivalent to approximately 1 fewer drinking days per month (with control group participants reporting 6.2 drinking days per month)
  - Equivalent to a 0.6 reduction in RAPI scores (with control participants reporting RAPI scores of 7.1 at baseline)



## Conclusions

- Effects were remarkably consistent across different intervention and participant characteristics, with a few notable exceptions:
  - Effects were slightly larger in adolescent (versus young adult) samples.
  - Interventions for adolescents using decisional balance or goal-setting exercises were more beneficial than those that did not.
  - Observed effects persisted for up to one-year after the intervention, but were attenuated at longer follow-ups.
- Brief alcohol interventions show promise for improving alcohol-related outcomes for adolescents and emerging adults.



# Acknowledgements

- This work was supported by Award Number R01AA020286 from the National Institute on Alcohol Abuse and Alcoholism. The content is solely the responsibility of the author and does not necessarily represent the official views of the National Institute on Alcohol Abuse and Alcoholism or the National Institutes of Health.





# Contact Information

Emily E. Tanner-Smith, Ph.D.  
Research Assistant Professor

E-mail: [e.tanner-smith@vanderbilt.edu](mailto:e.tanner-smith@vanderbilt.edu)

Website: <https://my.vanderbilt.edu/emilytannersmith/>

Vanderbilt University  
Peabody Research Institute  
Department of Human and Organizational Development  
Box 0181 PMB, 230 Appleton Place  
Nashville, TN 37203-5721  
(615) 322-6304 (P)  
(615) 322-0293 (F)