

Systematic review of cross-sectional studies of marketing and alcohol use

Alcohol Marketing and Underage Drinking Consensus Project

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Summary of Cross-sectional Studies

- Many cross-sectional studies have investigated the associations between exposure to alcohol marketing and drinking beliefs, attitudes, and behaviors among young people
- Multiple reviews that include cross-sectional studies have been conducted
- Few, if any, systematic reviews or meta-analyses have been published

Reviews of Cross-sectional Studies

- Cross-sectional survey research relies on self-reports of exposure to media messages and alcohol consumption measured at a single point in time
- Myriad Measures of Exposure
 - Exposure or Potential Exposure
 - Attention
 - Receptiveness (Liking, Affect, Identification)
 - Recall/Recognition
- Cross-sectional survey studies provide consistent evidence that exposure to marketing and pro-substance media messages is associated with
 - Substance behaviors
 - Perceived prevalence of substance use behaviors
 - Expectancies and other alcohol-related beliefs
- Associations may be stronger for youth

Limitations of Cross-sectional Studies

- ▶ Cross-sectional survey research relies on self-reports of exposure to media messages and alcohol consumption at a single point in time
 - ▶ Correlational
 - ▶ Recall bias
 - ▶ Selective attention
 - ▶ Spuriousness (associations result of common predisposing factors)
 - ▶ Ignores cumulative effects
- ▶ Given the subtle nature of many substance use messages, their processing may not be captured by explicit measures of recall
- ▶ Associations tend to be modest and sometimes inconsistent across measures and studies
- ▶ Publication bias

Reviews

- ▶ Grube, J. W. (2004). Alcohol in the media: Drinking portrayals, alcohol advertising, and alcohol consumption among youth. In R. Bonnie & M. E. O'Connell (Eds.), *Reducing underage drinking: A collective responsibility, background papers* [CD-ROM]. Committee on Developing a Strategy to Reduce and Prevent Underage Drinking. Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.
- ▶ Pechmann, C., Biglan, A., Grube, J.W., & Cody, C. (2011). Transformative consumer research for addressing tobacco and alcohol consumption. In D.G. Mick, S. Pettigrew, C. Pechmann, & J.L. Ozanne (Eds.), *Transformative consumer research for personal and collective well-being* (pp. 353-389). New York: Routledge.
- ▶ Russell, C. A., Russell, D. W., & Grube, J. W. (2016). Substance use and media. In K. Sher (Ed.), *The Oxford handbook of substance use disorders* (Vol. 1, pp. 625-649). New York: Oxford University Press.

For countervailing views.....

- ▶ Nelson, J. P. (2010). What is learned from longitudinal studies of advertising and youth drinking and smoking? A critical assessment. *Int J Environ Res Public Health*, 7(3), 870-926.

“Substantial shortcomings are found in the studies, which preclude a causal interpretation.”

- ▶ Nelson, J.P. (2011). Alcohol marketing, adolescent drinking and publication bias in longitudinal studies: A critical survey using meta-analysis. *Journal of Economic Surveys*, 25, 191-232.

“The empirical results are consistent with publication bias, omitted variable bias in some studies, and lack of a genuine effect, especially for mass media.”

- ▶ Smith, L. A., & Foxcroft, D. R. (2009). The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies. *BMC Public Health*, 9, 51.

“...data ... suggest there is an association between exposure to alcohol advertising or promotional activity and subsequent alcohol consumption in young people. Inferences about the modest effect sizes found are limited by the potential influence of residual or unmeasured confounding.”

Tom in the Making

- ▶ Viewers held significantly more positive attitudes toward drinkers after the pro- alcohol episode than after the anti- alcohol episode, $t(190) = 3.50, p < .001, d = 0.51$.
- ▶ Including an epilogue after a pro- alcohol episode was related to more negative attitudes toward drinkers compared to a pro- alcohol episode with no epilogue, $t(190) = 3.82, p < .001, d = 0.55$.
- ▶ The pro-alcohol narrative without an epilogue was related to significantly more positive attitudes toward drinkers when compared with all other conditions, $t(190)s > 3.50, ps < .001, ds \geq 0.50$,
- ▶ Pro-alcohol narrative condition with an epilogue did not differ significantly from the two anti-alcohol narrative conditions, $t(190) = .95, p = .34$ and $t(190) = .32, p = .75$.

Russell, C., Russell, D., McQuarrie, E., Grube, J.W. (2017). Alcohol storylines in television episodes: The preventive effect of corrective epilogues. *Journal of Health Communication*, 8, 647-656. doi:10.1080/10810730.2017.1341564.

Regression Results for Attitudes toward Drinkers and Drinking Intentions

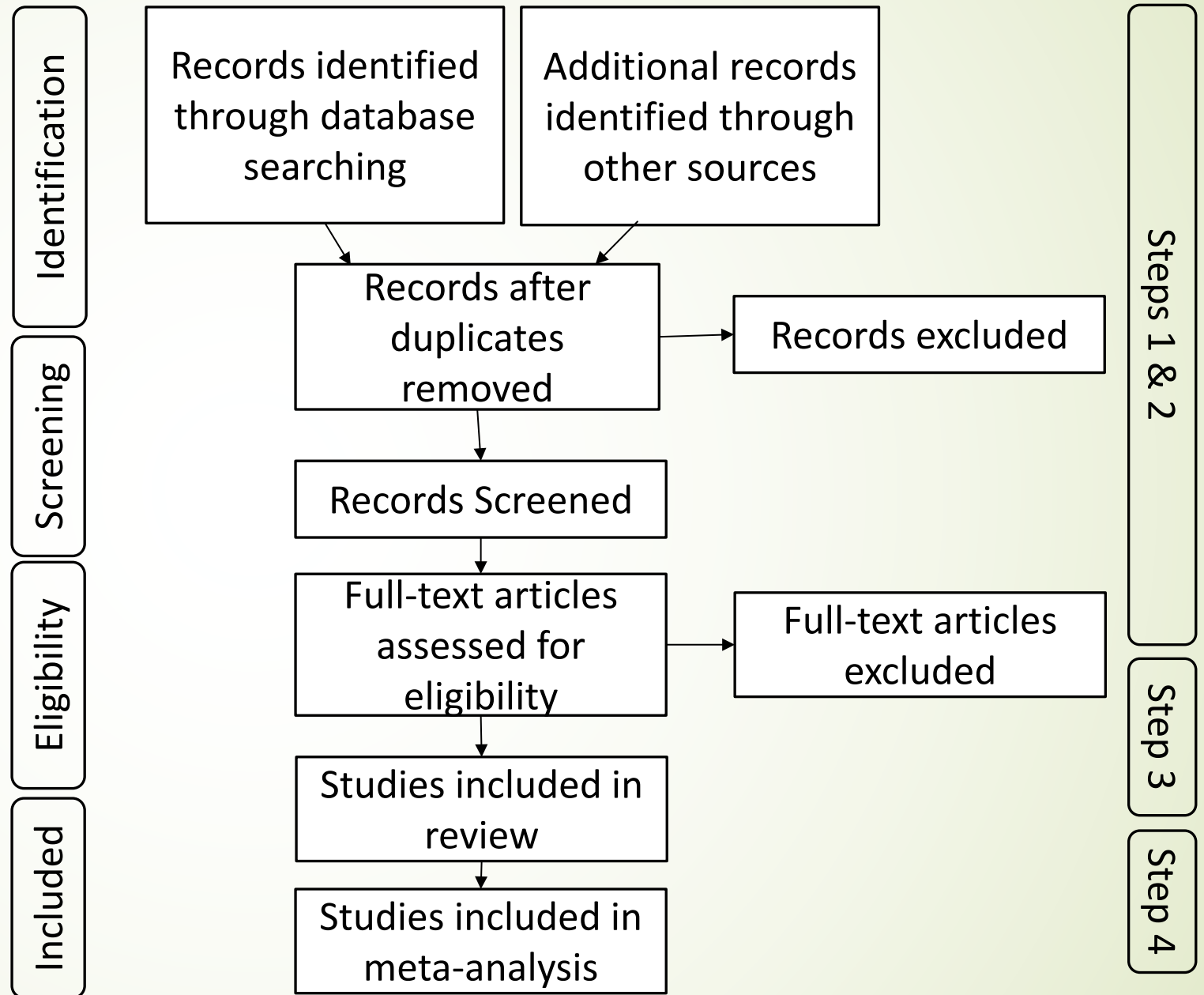
Dependent Variable:	Attitudes toward Drinkers				Drinking Intentions			
	b	SE	t	Sig.	b	SE	t	Sig.
Model 1	R ² = .18, F(7,446) = 13.91, p = .001				R ² = .18, F(7,448) = 14.17, p = .001			
(Constant)	0.844	0.27	3.087	0.002	-0.327	0.327	-0.999	0.318
Epilogue Present	-0.208	0.09	-2.335	0.02	-0.093	0.106	-0.877	0.381
Persuasion Knowledge	-0.066	0.07	-0.992	0.322	-0.045	0.08	-0.569	0.569
Transportation	0.056	0.03	2.005	0.046	0.079	0.033	2.382	0.018
Child Year of Birth	0.099	0.03	3.309	0.001	0.124	0.036	3.466	0.001
Child Gender	0.021	0.09	0.231	0.818	0.091	0.106	0.855	0.393
TV Hours / Week	0.01	0	3.004	0.003	0.007	0.004	1.769	0.078
Reactance	0.336	0.06	6.167	< .001	0.458	0.065	7.029	< .001

Russell, C., Hamby, A.M., Grube, J.W., & Russell, D. How Public Health Epilogues Affect Alcohol Storylines' Influence on Youth: The Interplay of Narrative Transportation and Persuasion Knowledge.

Review of Cross-Sectional Studies

Proposed Approach

PRISMA Flow Diagram



Step 1: Abstract Screening

- Initial abstracts will be screened based on inclusion criteria:
 - Participants aged 12-18
 - Exposure – alcohol marketing*
 - Outcomes – initiation (lifetime), QF, heavy use, problems*
 - All countries?
 - English language
 - Published
 - Cross-sectional design
 - Date published*

*Will make decisions about these criteria after we see the studies

Step 2: Full-text Review

- ▶ Full-text articles assessed for quality and eligibility by 2 members of research team
 - ▶ Quality assessment based on Newcastle-Ottawa Quality Assessment Scale
 - ▶ Clearly defined exposure
 - ▶ Clearly defined outcome
 - ▶ Response rate
 - ▶ Important controls included (minimized omitted variable bias)
 - ▶ Confirm eligibility
- ▶ Create an data base with each study's authors, year, effect size, exposure, outcome, etc.
 - ▶ Contact study authors if necessary information is missing (e.g., effect sizes) or we need clarification

Step 3: Summarize Literature

- Final set of screened studies will be summarized
- Organize literature by
 - Exposure type
 - Outcome (e.g., initiation/lifetime, Q-F, heavy use, problems)
 - Year
 - Age group
 - Gender
 - Race/ethnicity
- Summary review

Step 4: Meta-analysis and Meta-regression

- Will *attempt* a meta-analysis if there is enough consistency across studies
- Will explore meta-regression with publication year, exposure measures, covariates (e.g., age, gender, race/ethnicity) for different alcohol use outcomes (e.g., initiation, frequency, quantity, heavy episodic drinking, problems)
- Sensitivity analysis
- Assess for publication bias (e.g., funnel plots; p-curves) and selective reporting

Questions

- What criteria will be used to exclude studies before they are sent to us?
- Will we have list of all initially screened publications?
- Will we need to search reference lists of papers we review?
- Do we have a target date range for studies to include?
- Should we focus on specific outcomes and exposures?
- Will we need to check-in with group as we make decisions about inclusion or exclusion criteria?
- How many studies will we have?
- Timeline?

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