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Youth Smoking and the Media

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Effects of tobacco-related press coverage on youth smoking attitudes and behaviors

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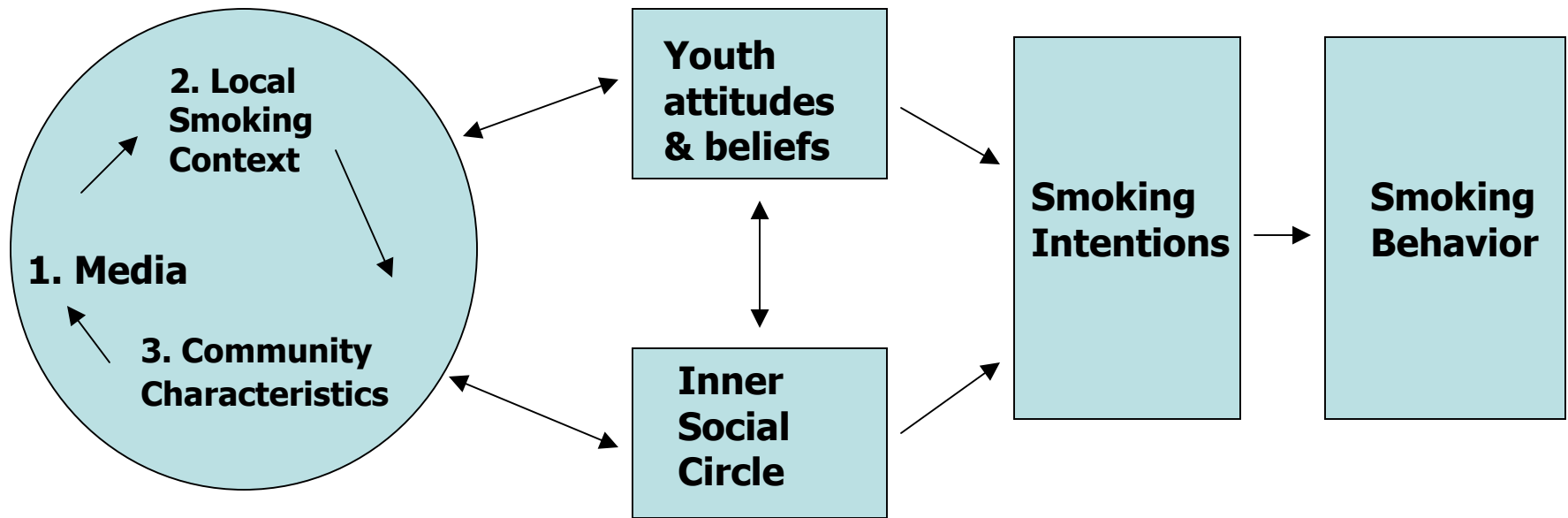
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Background

- Tobacco use continues to be a problem and almost all new users are children
- Geographic variation in youth smoking prevalence suggests pertinent community-level factors influencing risk of tobacco use.
- Examining community physical and social influences, as well as institutional structure differences, may offer important information for interventions
- The news media are a key community-level influence

Conceptual Framework



1. Paid & Unpaid Media: Content, Prominence and Tone
2. Policies, programs, services, marketing & promotions
3. Political, economic, demographic and cultural influences

Data Collection and Preparation

- Sample of 316 newspapers circulating at >5% in communities surrounding schools participating in nationally-representative Monitoring the Future (MTF) study (funded by the National Institute on Drug Abuse)
- National newspaper monitoring service clipped tobacco-related articles from sampled newspapers according to design search terms
- Sampled 1/3 of articles by day per month (Evans and Ulasevich, in press)
- Sampled articles coded for 2 measures of 'slant': event and opinion (positive and negative for both)
- N (2001 and 2002) = 8,680 articles
- Articles aggregated by newspaper per month, giving total volume per community per month, as well as negative and positive event and opinion slant variables

Data Preparation, cont.

- Opportunity to publish computed for each newspaper. Total monthly volume and slant adjusted for opportunity to publish per 10,000 pages.
- Community-specific circulation rates computed per newspaper. Adjusted monthly volume and slant aggregated to the community level and adjusted for circulation rates.
- Merged with nationally-representative 8th, 10th, and 12th grade MTF student survey data (weighted N=84,195).
- Monthly adjusted volume and slants summed for 5 months preceding student survey administrations.
- Final measure for total volume: **5-month sum of # of articles per community adjusted for the opportunity to publish per 10,000 pages**

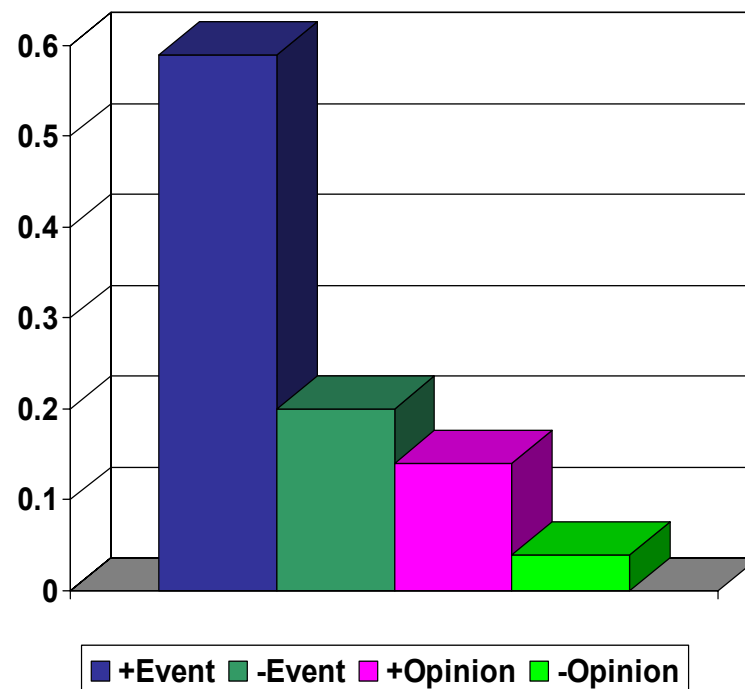
Analyses

- Analyses conducted with STATA v.8
- SVYLOGIT and SVYREG procedures used in order to account for both the clustered nature of the data (students within communities, with each community having single measures of news coverage) as well as sampling weights accounting for the probability of survey participation

News Variables (N=84,195)

News Variables	Range	Mean/ Proportion
Total Volume (# of articles)	0–131.4	21.91
<u>Slants (Proportions)</u>		
Positive Event		0.59
Negative Event		0.20
Positive Opinion		0.14
Negative Opinion		0.04

Slants as Proportion of Total Volume



Outcomes

**Proportion
or Mean
(SE)**

Most/all friends smoke (n=46,962)	.16 (.004)
Think 70+% of students in school smoke (n=20,812)	.23 (.006)
Perceive great harm in smoking 1+ pack/day (n=77,100)	.68 (.004)
Perceive no risk of addiction (n=23,333)	.66 (.004)
Don't mind being near smokers (n=29,070)	.50 (.005)
Definitely won't be smoking in 5 years (n=27,562)	.62 (.005)
Current smoking (n=82,007)	.19 (.004)
Avg. # of cigarettes smoked in past 30 days among smokers (n=15,586)	5.78 (0.12)

Indirect Relationships: Press Coverage and Smoking-Related Attitudes and Beliefs

Outcome	Volume	+ Event	- Event	+ Opinion	- Opinion
	OR	OR	OR	OR	OR
Think 70+% of students smoke	1.00	1.00	1.16	1.43	3.24***
Perceive no risk of addiction	1.00	0.93	0.79	1.41*	1.01
Current smoking	1.00	1.11	0.92	1.18	0.66*
	Coeff	Coeff	Coeff	Coeff	Coeff
# Of cigarettes smoked among current smokers	0.003*	-0.05	-0.05	0.17	-0.10

Controlling for grade (8th vs. 10th/12th), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, nights out, truancy, cigarette price, and year 2002 dummy. *p<.05; ***p<.001.

Indirect Relationships: Press Coverage and Smoking-Related Attitudes and Beliefs Controlling for Daily Newspaper Reading

Outcome	Volume	+ Event	- Event	+ Opinion	- Opinion	Read daily
	OR	OR	OR	OR	OR	OR
Think 70+% of students smoke	1.00	0.99	1.14	1.44	3.35***	1.06
No risk of addiction	1.00	0.93	0.79	1.41*	1.04	1.03
Great harm in smoking	1.00	0.96	0.73*	1.12	0.89	1.20***
Don't mind being near smoker	1.00	1.06	1.04	0.84	0.82	0.92+
Current smoking	1.00	1.29+	1.14	0.86	0.75	0.91+
	Coeff	Coeff	Coeff	Coeff	Coeff	Coeff
# Of cigarettes smoked	0.004**	-0.07	-0.07	0.09	0.01	-0.02

+p<.10; *p<.05; **p<.01; ***p<.001

Direct Relationships: Press Coverage, Newspaper Reading, and Perceived Student Smoking and Risk of Addiction

Outcome	Volume	+ Event	- Event	+ Opinion	- Opinion	Read daily
	OR	OR	OR	OR	OR	OR
Think 70+% of students smoke	1.00	1.05	1.29	1.48	3.03***	1.82*
Volume/daily reading:	OR = 0.99*					
No risk of addiction	1.00	0.94	0.71+	1.48*	1.13	0.93
- Event/daily reading:	OR = 2.19+					

Controlling for grade (8th vs. 10th/12th), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, nights out, truancy, cigarette price, and year 2002 dummy. Models included interactions between daily newspaper reading and all 5 newspaper reading items.
 +p<.10; *p<.05; **p<.01; ***p<.001.

Direct Relationships: Press Coverage, Newspaper Reading, and 5-Year Smoking Intentions and Perceived Harm

Outcome	Volume	+ Event	- Event	+ Opinion	- Opinion	Read daily
	OR	OR	OR	OR	OR	OR
Great harm in smoking	1.00	0.94	0.74*	1.05	0.90	0.99
+ Opinion/daily reading:	OR = 1.62+					
Definitely won't be smoking in 5 years	1.00	0.99	1.03	1.00	1.03	0.93
+ Opinion/daily reading:	OR = 2.45*					

Controlling for grade (8th vs. 10th/12th), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, nights out, truancy, cigarette price, and year 2002 dummy. Models included interactions between daily newspaper reading and all 5 newspaper reading items.

+p<.10; *p<.05; **p<.01; ***p<.001.

Direct Relationships: Press Coverage, Newspaper Reading, and # of Cigarettes Smoked by Current Smokers

Outcome	Volume	+ Event	- Event	+ Opinion	- Opinion	Read daily
	Coeff	Coeff	Coeff	Coeff	Coeff	Coeff
# Of cigarettes smoked	0.004*	-0.05	-0.00	0.13	0.12	0.15
- Opinion/daily reading:	Coeff = -0.72*					

Controlling for grade (8th vs. 10th/12th), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, nights out, truancy, cigarette price, and year 2002 dummy. Models included interactions between daily newspaper reading and all 5 newspaper reading items.

+p<.10; *p<.05; **p<.01; ***p<.001.

Discussion & Implications

Reciprocal relationship between local smoking context, community issues, and media coverage of tobacco

Analyses indicate that press coverage may relate to some youth smoking attitudes and behaviors

Such relationships may be inconsistent, and may indicate that press coverage may have both indirect and direct relationships

Discussion & Implications, cont.

Use of total volume alone is not sensitive enough to capture nuances of press coverage and relationships with tobacco use.

Press coverage contains a mix of both positive and negative messages on tobacco control—both via events and opinions

Nature of opinion slant in coverage is key – not only in relation to attitudes/perceptions, but also in relation to consumption levels

Indications of possible direct relationships with smoking-related attitudes and behaviors may indicate usefulness of such research with adult populations with more newspaper media consumption

Limitations

Work with model still on-going; continue to investigate effects of including total volume with slants

Inclusion of newspaper readership introduces variable that has little overall participation among youth, especially 8th graders

Daily newspaper reading can be defined in different ways (and thus implicate different types of readers), and may or may not include reading articles related to tobacco

Other approaches to controlling for newspaper characteristics may be preferable

The use of a 5-month sum is a constraint of our current data; however, alternative definitions that would allow for inclusion of longer-term tobacco press coverage may yield different results