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**Youth Smoking and the Media**

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NCI State and Community Research Initiative

# Does tobacco press coverage influence young people's smoking-related attitudes and behaviors?

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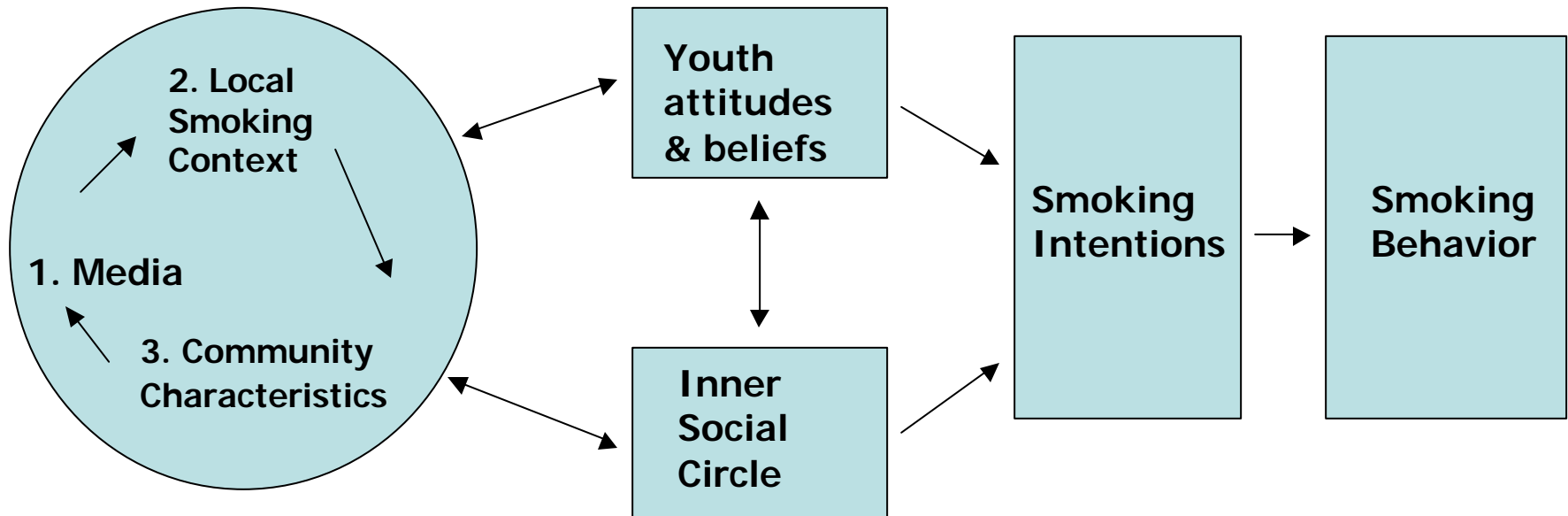
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# Conceptual Framework



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

# Data Collection

- Sample of 310 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 clipping service reads each of sampled newspaper and clips and tobacco-related articles according to defined search terms
- N (2001) > 16,000 articles
- Archive all articles. Code 1/3 sample by day per month (Evans and Ulasevich, in press)

# Data Preparation

- Articles coded for 2 measures of 'slant' or tone: event and opinion
- Articles aggregated by newspaper per month, giving total volume per community per month, as well as total slant variables

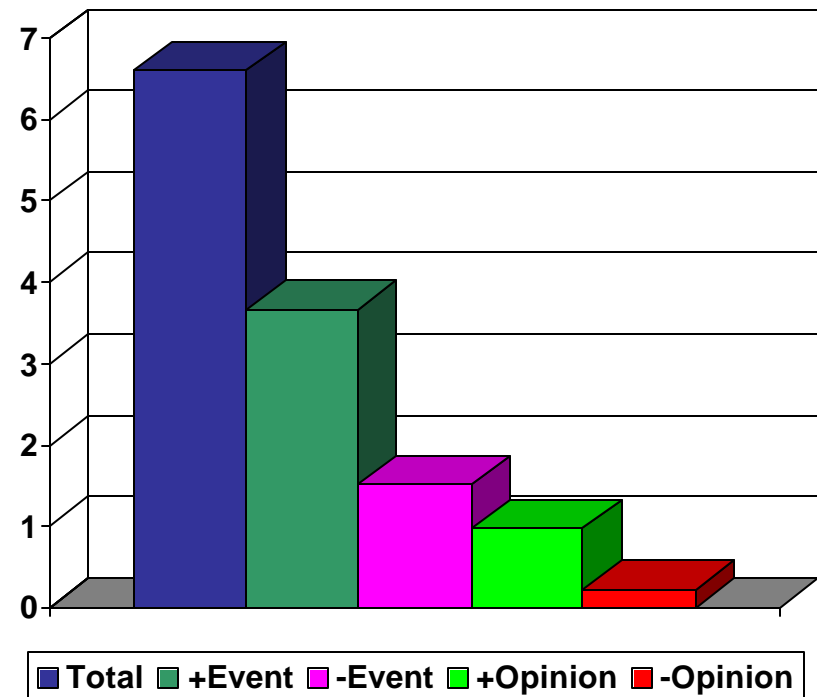
# Data Preparation, cont.

- Opportunity to publish computed for each newspaper. Total monthly volume and slant outcomes adjusted for opportunity to publish per 100 pages.
- Community-specific penetration rates computed per newspaper, and adjusted monthly volume and slant outcomes aggregated to the community level, adjusted for penetration rates
- Community-level adjusted monthly volume and slant outcomes merged with nationally-representative 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade MTF student survey data (merged sample N=42,301)
- Monthly adjusted outcomes summed for 5 months preceding student survey administration per student
- Resulting final measures for total volume and slant outcomes:  
**5-month sums of the number of articles per community adjusted for the opportunity to publish per 100 pages**

# News Variables (N=42,301)

News Variables	Range	Mean (SE)
Total Volume	0–41.7	6.60 (.367)
Positive Event Slant	0–21.4	3.66 (.204)
Negative Event Slant	0–9.5	1.50 (.107)
Positive Opinion Slant	0–9.9	0.97 (.096)
Negative Opinion Slant	0–5.0	0.22 (.033)

Mean # of Articles Adjusted for Opportunity to Publish per 100 Pages



# Outcomes

Outcome	Mean Proportion (SE)
Most/all friends smoke (n=23,624)	.17 (.006)
>70% of students in school smoke (n=10,554)	.23 (.009)
Definitely won't be smoking in 5 years (n=13,852)	.61 (.006)
Perceive great harm in smoking 1+ pack/day (n=38,851)	.69 (.005)
Perceive no risk of addiction (n=11,792)	.64 (.006)
Don't mind being near smokers (n=14,647)	.51 (.007)
Current smoking (n=41,210)	.20 (.007)
Avg. # of cigarettes smoked in past 30 days among smokers (n=8,315)	5.75 (0.17)

# 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

# Total Articles and Smoking-Related Attitudes and Beliefs

Outcome	OR <sup>a</sup>	(95% CI)
Most/all friends smoke	1.00	(0.99, 1.02)
>70% of students in school smoke	1.01+	(1.00, 1.03)
Definitely won't be smoking in 5 years	0.99	(0.99, 1.00)
Perceive great harm in smoking 1+ pack/day	1.01+	(1.00, 1.01)
Perceive no risk of addiction	1.00	(0.99, 1.01)
Don't mind being near smokers	1.00	(1.00, 1.01)

<sup>a</sup>Controlling for grade (8<sup>th</sup> vs. 10<sup>th</sup>/12<sup>th</sup>), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, Smoke-free Air Index, and state cigarette price.

+p<.10

# Slant Types and Smoking-Related Attitudes and Beliefs

Outcome	+ Event	- Event	+ Opinion	- Opinion
	OR <sup>a</sup>	OR <sup>a</sup>	OR <sup>a</sup>	OR <sup>a</sup>
Most/all friends smoke	0.99	1.01	1.03	1.06
>70% of students in school smoke	0.99	0.97	1.06	1.40 <sup>***</sup>
Definitely won't be smoking in 5 years	1.00	1.02	0.96	0.91
Perceive great harm in smoking 1+ pack/day	1.01	1.00	1.02	0.95
Perceive no risk of addiction	1.00	0.98	1.01	1.07
Don't mind being near smokers	1.00	1.01	1.01	1.02

<sup>a</sup>Controlling for grade (8<sup>th</sup> vs. 10<sup>th</sup>/12<sup>th</sup>), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, Smoke-free Air Index, and state cigarette price.

\*\*\*p<.001

# Total Articles and Smoking Behaviors

<b>Outcome</b>	<b>OR<sup>a</sup></b>	<b>(95% CI)</b>
Current smoking (past 30 days)	1.00	(0.99, 1.01)
	<b>Coeff.<sup>b</sup></b>	<b>(95% CI)</b>
Number of cigarettes smoked (past 30 days)	0.01	(-0.00, 0.02)

<sup>a</sup>Controlling for grade (8<sup>th</sup> vs. 10<sup>th</sup>/12<sup>th</sup>), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, Smoke-free Air Index, and state cigarette price.

<sup>b</sup>Modeling the natural log-transformed number of cigarettes smoked in the past 30 days among smokers, with controls as above.

# Slant Types and Smoking Behaviors

Outcome	+ Event	- Event	+ Opinion	- Opinion
	OR <sup>a</sup>	OR <sup>a</sup>	OR <sup>a</sup>	OR <sup>a</sup>
Current smoking (past 30 days)	0.99	0.97	1.03	1.08
	Coeff. <sup>b</sup>	Coeff. <sup>b</sup>	Coeff. <sup>b</sup>	Coeff. <sup>b</sup>
Number of cigarettes smoked (past 30 days)	-0.01	-0.01	0.01	0.17***

<sup>a</sup>Controlling for grade (8<sup>th</sup> vs. 10<sup>th</sup>/12<sup>th</sup>), gender, ethnicity (White vs. other), earned income, average parental education, living with both parents, GPA, Smoke-free Air Index, and state cigarette price.

<sup>b</sup>Modeling the natural log-transformed number of cigarettes smoked in the past 30 days among smokers, with controls as above.

\*\*\*p<.001

# Discussion & Implications

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

Analysis in progress indicates that press coverage of tobacco may be related to some youth smoking attitudes and behaviors

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

## **Discussion & Implications, cont.**

Volume of coverage associated with both normative perceptions of smoking, and increased perceptions of risk

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

Further research will investigate specific grade effects and linearity of measures