Association of Various Components of Media Literacy and Adolescent Smoking

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***Objective*: To determine which specific aspects of media literacy were most strongly associated with smoking outcomes. *Methods*: Students at a public high school responded to cross-sectional survey items measuring smoking outcomes, components of media literacy, and other variables. *Results*: Of the 1211 participants, 19% were current smokers (N = 216) and 40% of the nonsmokers (N = 342) were susceptible to smoking. In the adjusted models, current smoking was most strongly related to representation-reality domain items, but susceptibility to smoking was associated with each of the media literacy domains. *Conclusion*: Varied relationships exist between individual facets of media literacy and smoking outcomes.**

***Key words*: Media literacy, smoking, health education, health promotion, prevention**

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Smoking is the leading cause of morbidity and mortality in the United States.[1] Of the 442,000 people who die from smoking each year,[1] the vast majority began at age 18 or younger.[2] It is therefore urgent to characterize better the factors that predispose adolescents to smoke.

It is known that media exposure to smoking contributes strongly to initiation of adolescent smoking.[3-9] This is true whether that exposure occurs in narrative contexts such as films[3-5] or in persuasive contexts such as advertising and promotion.[6-9] One promising strategy to reduce adolescent smoking, therefore, is to reduce exposure to media representation of smoking.[3,10,11] However, it is not always possible and/or feasible to reduce such exposure. In fact, recent research has shown that the tobacco industry has been able to continue marketing effectively to adolescents despite the restrictions sought by the Master Settlement Agreement of 1998. In particular, adolescent exposure to tobacco-related point-of-sale promotions, messages in theatrical trailers, and counterproductive industry-sponsored "prevention" messages have increased,[8,12-14] to the extent that some researchers conclude that the tobacco industry is now as able to market to youth as it was prior to the Master Settlement Agreement.[15]

A supplementary tactic available to public health advocates would be to promote media literacy, often defined as the ability to understand, analyze, evaluate, and create media messages in a wide variety of forms.[16-18] Organizations such

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Table 1
Media Literacy Theoretical Framework

Media Literacy Domain	Related Media Literacy Core Concepts
Authors and Audiences (AA)	AA1: Authors create media messages for profit and/or influence. AA2: Authors target specific audiences.
Messages and Meanings (MM)	MM1: Messages contain values and specific points of view. MM2: Different people interpret messages differently. MM3: Messages affect attitudes and behaviors. MM4: Multiple production techniques are used.
Representation and Reality (RR)	RR1: Messages filter reality. RR2: Messages omit information.

as the American Academy of Pediatrics, the Centers for Disease Control and Prevention, and the Office of National Drug Control Policy recommend media literacy to buffer the impact of mass media messages on adolescent smoking.[2,19,20] Consequently, many organizations integrate elements representing media literacy into their instructional programming.

Primack et al have conducted prior research on the relationship between media literacy and adolescent smoking.[21,22] These authors first used theoretical modeling, item refinement, and factor analysis to develop and validate a scale measuring adolescents' media literacy with regard to smoking.[22] They then found in consequent analyses that adolescents' overall "smoking media literacy" as measured by this scale was strongly and independently associated with both reduced adolescent smoking and reduced susceptibility to future smoking.[21,22] However, one important omission of those previous analyses—of particular import and relevance to those involved in research and practice on health education and health promotion—was that they did not delve into the relationship between smoking outcomes and items measuring specific, individual components of media literacy.

Two major theoretical models show that media literacy is a multifaceted construct,[18,23] some facets of which may be more important than others in terms of their potential relationship with smoking-related behavior. Although the 2 major theoretical models describing this construct overlap substantially, there are differences in emphasis. A British model emphasizes that (1) the purposes of media producers and characteristics of target audiences should be carefully considered, (2) there are multiple complex production techniques and symbol systems used to convey meaning, and (3) there is a complex relationship between media representations and social reality.[23] A US model emphasizes that (1) media messages are carefully constructed with the use of their own complex language, (2) different individuals interpret messages differently, (3) messages contain inherent values and perspectives, and (4) media messages are usually created for profit and/or power.[18] Integrating both of these models into a comprehensive theoretical framework fully captures the construct of media literacy (Table 1).[22]

Different antismoking media literacy programs may be developed to emphasize different elements of this paradigm. Programs portraying the tobacco industry as powerful and manipulative of particular target markets, for instance, focus primarily on the author-audience domain. Programs that describe deconstruction techniques to point out how marketers promote tobacco by using appealing imagery and symbols, colors, fonts, logos, symbols, camera angles, and lighting patterns to evoke emotional responses rely primarily on the messages-meanings domain. Finally, programs that describe the ironic difference between portrayal of tobacco in both narrative and persuasive media and the true effects of tobacco use on health focus primarily on the repre-

Table 2
Sample Characteristics by Smoking Status[a]

Characteristic	Total Sample (N=1211) N (%) or mean(SD)	Current Smoker (N=216) N (%) or mean(SD)	P Value[b]	Susceptible to Smoking N (%) or mean(SD)	P Value[c]
Demographics					
Age					
14	178 (15.9)	18 (8.4)	<0.001[d]	56 (15.3)	0.47
15	257 (23.0)	36 (16.8)		94 (25.7)	
16	304 (27.2)	66 (30.8)		106 (29.0)	
17	292 (26.1)	75 (35.1)		84 (23.0)	
18	88 (7.9)	19 (8.9)		26 (7.1)	
Gender					
Male	534 (47.2)	100 (46.7)	0.89	184 (48.9)	0.45
Female	598 (52.8)	114 (53.3)		192 (51.1)	
Race					
White	1040 (92.5)	203 (94.4)	0.27	341 (91.2)	0.60
Black	42 (3.7)	4 (1.9)		17 (4.6)	
Other	42 (3.7)	8 (3.7)		16 (4.3)	
Parental Education					
No more than one parent completed HS	56 (5.0)	22 (10.2)	<0.001[d]	14 (3.8)	0.98
One parent completed college or both parents completed HS	351 (31.3)	75 (34.7)		108 (29.3)	
One parent completed college and one completed HS	310 (27.6)	64 (29.6)		103 (27.9)	
Both parents completed college	406 (36.2)	55 (25.5)		144 (39.0)	
Family and Peer Smoking					
Parental smoking					
Yes	430 (38.2)	127 (58.8)	<0.001[d]	142 (38.1)	0.03[d]
No	697 (61.9)	89 (41.2)		231 (61.9)	
Sibling smoking					
Yes	244 (22.0)	90 (42.7)	<0.001[d]	89 (24.5)	<0.001[d]
No	863 (78.0)	121 (57.4)		275 (75.6)	
Friend Smoking					
Yes	575 (55.6)	197 (96.6)	<0.001[d]	231 (68.1)	<0.001[d]
No	460 (44.4)	7 (3.4)		108 (31.9)	
Other Variables[e]					
Demanding parenting (range 1-4): My parents have rules I have to follow My parents always want to know where I am	3.3 (0.6)	3.1 (0.7)	<0.001[d]	3.2 (0.5)	<0.001[d]
Responsive parenting (range 1-4): My parents listen to what I have to say My parents care about me	3.3 (0.6)	3.1 (0.6)	<0.001[d]	3.2 (0.5)	<0.001[d]
Sensation seeking (range 1-4): I like to do dangerous things I like to listen to loud music	2.7 (0.7)	3.1 (0.5)	<0.001[d]	2.8 (0.6)	<0.001[d]
Rebelliousness (range 1-4): I get in trouble at school I do whatever my teacher says to do [f]	1.8 (0.6)	2.3 (0.6)	<0.001[d]	1.9 (0.5)	<0.001[d]

(Continued next page)

Table 2 (continued)

Depression (range 1-4):	1.7 (0.7)	1.8 (0.7)	<0.001[d]	1.6 (0.7)	0.63
Over the past 2 weeks, how often have you been bothered by these things?[g]					
(a) Little interest or pleasure in doing things					
(b) Feeling down, depressed, or hopeless					
Self-esteem (range 1-4):	3.1 (0.6)	3.1 (0.6)	0.33	3.0 (0.6)	<0.001[d]
I like myself the way I am					
I worry that other kids don't like me[f]					
School achievement (range 1-4):	3.3 (0.6)	3.0 (0.6)	<0.001[d]	3.3 (0.6)	<0.001[d]
I generally get good grades					

Note.
Abbreviations: N = sample size; SD = standard deviation.
a Values do not always sum to the total N because of missing data.
b These P-values were computed with t-tests (for continuous variables) or chi-squared tests (for discrete variables) and compared nonsmokers versus smokers.
c These P-values were computed with t-tests (for continuous variables) or chi-squared tests (for discrete variables) and compared nonsmokers versus non-susceptible nonsmokers.
d P<0.10; thus, these variables were included in the multivariate analyses.
e Unless otherwise noted, these variables were measured on a 4-level Likert scale with response choices of 1= Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree.
f These items were reverse coded.
g Depression items were measured on a 4-level Likert scale with response choices of 1 = not at all, 2 = several days, 3 = more than half the days, 4 = nearly every day.

sentation-reality domain.

The question remains, however, as to which particular components of media literacy are most strongly associated with adolescent smoking. Knowing this may enable us to design focused antismoking campaigns that emphasize the most useful elements of this complex construct. Furthermore, this information will help organizations using media literacy in their programming to ensure that their strategies are as effective as possible in achieving tobacco control. The purpose of this study, therefore, was to determine associations between smoking outcomes and each of the various specific components of media literacy.

METHODS

Population, Setting, and Procedures

This was a cross-sectional study. A more detailed account of the complete study methodology has been previously published.[21,24] In brief, the study population for our questionnaire consisted of students attending a suburban public high school outside Pittsburgh, Pennsylvania, with a total enrollment of 1690. Male and female students were eligible to participate if they were 14-18 years old and were available to take the questionnaire on the regular school day in January 2005 when it was administered. On this date, 79 students were absent and 86 were unavailable because of in-school suspensions, field trips, or appointments with the nurse or guidance counselor; 1525 students were eligible to participate. Approval to administer the study questionnaire was granted by the superintendent of the school district and the Institutional Review Board (IRB) of the University of Pittsburgh. Both the superintendent and IRB agreed to a waiver of active parental informed consent because students were not asked to place their names or any other unique personal identifiers on the questionnaire and because the study would not have been feasible otherwise. Parental opt-out consent and student assent were required. Students were not penalized for lack of participation.

Measures

The questionnaire assessed 2 clinically relevant dependent variables: cur-

rent smoking, defined as having smoked at least once in the past 30 days, and susceptibility to future smoking, assessed with Pierce's reliable and valid 3-item scale.[7] According to this scale, a person is considered nonsusceptible only if he or she answers "definitely no" to the following 3 items: (1) Do you think that you will smoke a cigarette soon? (2) Do you think you will smoke a cigarette in the next year? (3) If one of your best friends were to offer you a cigarette, would you smoke it? Each of the items is measured on a 4-point Likert scale (definitely no / mostly no / mostly yes / definitely yes). We chose to use both current smoking and susceptibility to smoking as outcomes because each outcome is related to a different phase of the smoking uptake continuum. According to the theory of reasoned action,[25] which has been successfully used to model adolescent uptake of smoking,[26-29] naïve smokers first develop intention to smoke (approximated by Pierce's susceptibility scale) on their way to becoming actual smokers.[30]

The independent variables were students' responses to 18 items measuring specific, individual components of "smoking media literacy." These items were determined based on a 3-stage process of (1) development of over 100 items representative of the construct of media literacy using a comprehensive theoretical model, (2) honing of the items with expert and adolescent input, and (3) factor analysis to determine which items best represented the underlying construct of smoking media literacy.[22] Sample items include "Tobacco companies are very powerful, even outside of the cigarette business," "When people make movies and TV shows, every camera shot is very carefully planned," and "Advertisements usually leave out a lot of important information." All scale items are listed in Table 3.

We also assessed several variables shown previously to be related to current smoking.[3,7,21,31] Demographic information included age, race/ethnicity, gender, and parental education as a surrogate for socioeconomic status. Two components of authoritative parenting (responsive parenting and demanding parenting) were assessed with 4 items from Jackson's scale.[32] Students self-reported school achievement with a single item. Depression was assessed with the PHQ-2.[33,34] We assessed self-esteem with 2 items based on Rosenberg's scale,[35] rebellious behavior with 2 items from Smith and Fogg's scale,[36] and sensation seeking with 2 items from Zuckerman's scale.[37] All items were extensively pilot tested and are included in Table 2.

Analysis

We first performed a descriptive analysis of the questionnaires for the total sample, current smokers, and nonsmokers susceptible to smoking. We included only nonsmokers in the susceptibility analyses because this construct was validated in a population of nonsmokers.[7] We then used bivariate and multivariate logistic regression techniques to assess the association between the dependent variables (current smoking and susceptibility to smoking) and each of the independent variables (each of the individual 18 smoking media literacy items). Our primary multivariate models were trimmed to include only variables that had bivariate relationships with the outcomes at a level of $P < 0.10$ or stronger (see P-values in Table 2). We developed a different multivariable model for each of the independent variables. The tests for the main effects of media use variables were considered significant for $P < 0.05$.

RESULTS

Sample

Of the 1525 students who were eligible for the study, 1402 (92%) completed the questionnaire. Using specific criteria established before administering the survey, we eliminated any questionnaire if 3 or more responses were deemed to be impossible or extremely improbable (N=44) or if the students admitted to providing dishonest answers in a final survey item (N=147). The final sample size was therefore 1211 (86% of the surveys completed). The mean age of the 1211 respondents was 15.9 years; about half (48%; N=572) were male, and 92% (N=1092) were white.

Descriptive Data on Smoking, Susceptibility, and Other Variables

Of the 1211 participants with valid data, 19% were current smokers (N=216), and 40% of the nonsmokers (N=342) were susceptible to future smoking. Chi-squared and t-tests showed that many of the measured variables were significantly related to each of the outcomes (Table 2). Smoking was generally more common

Table 3
Bivariate and Multivariate Associations Between Smoking Media Literacy Items and Smoking Outcomes

Item	Related Core Concept	Current Smoking OR (95% CI) Unadjusted	Current Smoking OR (95% CI) Adjusted[a]	Susceptibility to Smoking OR (95% CI) Unadjusted	Susceptibility to Smoking OR (95% CI) Adjusted[b]
1 "Buy-one-get-one-free" deals on cigarettes are designed to get people addicted.	AA1	0.74 (0.61, 0.89)[c]	0.82 (0.64, 1.05)	0.83 (0.70, 0.99)[c]	0.91 (0.74, 1.17)
2 Tobacco companies are very powerful, even outside of the cigarette business.	AA1	0.96 (0.78, 1.18)	1.34 (1.01, 1.78)[c]	0.59 (0.49, 0.72)[d]	0.65 (0.52, 0.83)[c]
3 Tobacco companies only care about making money.	AA1	0.69 (0.56, 0.86)[c]	0.80 (0.60, 1.07)	0.53 (0.43, 0.66)[d]	0.59 (0.45, 0.76)[d]
4 Certain cigarette brands are designed to appeal to younger people.	AA2	0.81 (0.65, 1.01)	1.01 (0.76, 1.35)	0.71 (0.58, 0.87)c	0.74 (0.58, 0.96)[c]
5 Wearing a shirt with a cigarette logo on it makes you into a walking advertisement.	MM1	0.74 (0.61, 0.90)[c]	0.95 (0.73, 1.23)	0.56 (0.47, 0.68)[d]	0.69 (0.55, 0.86)[c]
6 Cigarette ads link smoking to natural things that humans want like love, good looks, and power.	MM1	0.68 (0.56, 0.82)[d]	0.86 (0.66, 1.11)	0.75 (0.63, 0.89)c	0.87 (0.70, 1.08)
7 Two people may see the same movie or TV show and get very different ideas about it.	MM2	0.87 (0.68, 1.13)	1.13 (0.79, 1.61)	0.62 (0.49, 0.78)d	0.68 (0.51, 0.91)[c]
8 Different people can see the same cigarette ad in a magazine and feel completely different about it.	MM2	0.92 (0.74, 1.14)	1.28 (0.94, 1.73)	0.60 (0.49, 0.73)[d]	0.63 (0.49, 0.81)[d]
9 A tobacco billboard may catch one person's attention but not even be noticed by another person.	MM2	0.80 (0.64, 1.01)	1.00 (0.73, 1.38)	0.60 (0.48, 0.74)[d]	0.67 (0.51, 0.87)[c]
10 People are influenced by TV and movies, whether they realize it or not.	MM3	0.64 (0.51, 0.79)[d]	0.86 (0.65, 1.14)	0.72 (0.59, 0.88)[c]	0.98 (0.76, 1.25)
11 People are influenced by advertising.	MM3	0.64 (0.51, 0.80)[d]	0.92 (0.67, 1.24)	0.66 (0.54, 0.81)[d]	0.77 (0.60, 0.98)[c]
12 When people make movies and TV shows, every camera shot is very carefully planned.	MM4	0.73 (0.58, 0.92)[c]	0.94 (0.68, 1.30)	0.52 (0.42, 0.64)[d]	0.58 (0.48, 0.75)[d]
13 There are often hidden messages in cigarette ads.	MM4	0.60 (0.49, 0.74)[d]	0.73 (0.56, 0.96)[c]	0.71 (0.59, 0.87)[c]	0.83 (0.65, 1.05)
14 Most movies and TV shows that show people smoking make it look more attractive than it really is.	RR1	0.68 (0.56, 0.82)[d]	0.76 (0.59, 0.99)[c]	0.79 (0.66, 0.94)[c]	0.96 (0.78, 1.18)
15 Cigarette ads show green, natural, healthy scenes to make people forget about the health risks.	RR1	0.56 (0.46, 0.69)[d]	0.59 (0.45, 0.78)[d]	0.68 (0.56, 0.83)[d]	0.70 (0.55, 0.89)[c]
16 When you see a "buy-one-get-one-free" cigarette deal, it's usually not actually a good deal in the long run.	RR1	0.55 (0.46, 0.67)[d]	0.66 (0.51, 0.86)[c]	0.52 (0.43, 0.63)[d]	0.63 (0.51, 0.79)[d]
17 When you see a smoking ad, it is very important to think about what was left out of the ad.	RR2	0.58 (0.48, 0.70)[d]	0.71 (0.55, 0.93)[c]	0.58 (0.48, 0.69)[d]	0.68 (0.55, 0.85)[c]
18 Advertisements usually leave out a lot of important information.	RR2	0.50 (0.40, 0.61)[d]	0.60 (0.45, 0.79)[d]	0.58 (0.47, 0.70)[d]	0.65 (0.51, 0.83)[c]

Note.
Abbreviations: OR = odds ratio; CI = confidence interval
a Multivariate model for current smoking was adjusted for age, gender, race, socioeconomic status, demanding parenting, responsive parenting, stress, sensation seeking, rebelliousness, depression, self esteem, and school achievement.
b Multivariate model for smoking susceptibility was adjusted for age, gender, race, socioeconomic status, demanding parenting, responsive parenting, stress, sensation seeking, rebelliousness, depression, self-esteem, and school achievement.
c P<0.05
d P<0.001

among older students (P < 0.001); those with lower socioeconomic status (P < 0.001); and those with parents, siblings, and friends who smoked (all P < 0.001). Smokers were also more likely to have less demanding parenting, less respon-

sive parenting, more sensation seeking, more rebelliousness, higher levels of depression, and lower levels of school achievement (all P < 0.001). Only gender (P = 0.89), race (P = 0.27), and self-esteem (P = 0.33) were not significantly related to current smoking. Susceptibility to smoking was more common in those with parents, siblings, and friends who smoked (P = 0.03, P < 0.001, and P < 0.001 respectively). Susceptibility to smoking was also more common in those with less demanding parenting, less responsive parenting, more sensation seeking, more rebelliousness, lower self-esteem, and lower school achievement (all P < 0.001). Age (P = 0.47), gender (P = 0.45), race (P = 0.60), socioeconomic status (P = 0.98), and depression (P = 0.63) were not related to susceptibility to smoking.

Bivariate and Multivariate Analyses

Bivariate analyses showed that 13 of the 18 media literacy items were significantly associated with reduced odds of smoking (Table 3). Of the 5 items not associated with smoking, 2 were from the authors-audiences domain ("Tobacco companies are very powerful, even outside of the cigarette business" and "Certain cigarette brands are designed to appeal to younger people"); and 3 were from the messages-meanings domain ("Two people may see the same movie or TV show and get very different ideas about it." "Different people can see the same cigarette ad in a magazine and feel completely different about it." "A tobacco billboard may catch one person's attention but not even be noticed by another person"). Each of these 3 items represented concept 2 of the messages-meanings domain, labeled "Different individuals interpret media messages differently." In the multivariate model, only 7 items had a significant relationship with current smoking. One item, "Tobacco companies are very powerful, even outside of the cigarette business," was associated with increased smoking. Each of the other 6 items was associated with decreased smoking. These included 1 item from the messages-meanings domain ("There are often hidden messages in cigarette ads") and all 5 items from the representation-reality domain (Table 3).

Bivariate analyses showed that all 18 smoking media literacy items were significantly associated with reduced odds of susceptibility to smoking (Table 3). In the fully adjusted model, however, only 13 of the 18 items retained significant relationships with the outcome. In this case, all 13 of the items were associated with decreased susceptibility to smoking. Of these 13 items, 3 represented the authors-audiences domain (items 2-4), 6 represented the messages-meanings domain (items 5, 7-9, 11, and 12), and 4 represented the representation-reality domain (items 15-18). All specific items and odds ratios are found in Table 3.

DISCUSSION

Our study found that 13 of the 18 media literacy items were significantly and independently associated with reduced susceptibility to smoking, and that these items evenly represented all of the major domains of media literacy. We also found that the vast majority of the media literacy items significantly and independently associated with reduced current smoking represented the representation-reality domain. Finally, we found that one item from the authors-audiences domain was independently associated with increased odds of smoking among all participants but reduced odds of susceptibility to smoking among nonsmokers.

It is interesting that we found different results for our 2 different smoking-related outcomes. In particular, many more of the media literacy items, representing a more comprehensive set of core concepts, were associated with reduced susceptibility than with reduced current smoking. For instance, whereas responses to the items related to core concept MM2 ("different people interpret messages differently") were associated with reduced susceptibility to future smoking among nonsmokers, these items were not associated with being a smoker. Thus, one possible explanation is that elements such as these are particularly meaningful to those who are more naïve to smoking because message analysis skills are considered especially important in the absence of life experience or personally acquired information.[38] It therefore may be particularly valuable for practitioners to teach a variety of skills to evaluate smoking-related messages in those with absence of life experience with smoking.

Items associated with reduced current smoking nearly all represented the rep-

resentation-reality domain. Thus, practitioners working with older or smoking populations may wish to emphasize the stark contrast between the realities behind cigarette smoking and media portrayals (whether those portrayals are in narrative media such as films or whether they are in advertisements/promotions). Even in this case, however, it may still be valuable to at least summarily cover all aspects of media literacy. This is because solid background involving the author-audience domain and the messages-meanings domain are often necessary to adequately highlight the sharp contrast between actual smoking and media portrayal of smoking. Only those learners who have adequately explored (1) the motives, perspectives, and targets of the tobacco industry and (2) the multiple production techniques and symbol systems used to manipulate and craft their messages will be truly able to appreciate the difference between media portrayals of smoking and the truth.

Interestingly, our results showed that students more strongly agreeing with the statement "Tobacco companies are very powerful, even outside of the cigarette business" actually had greater odds of being smokers. It is possible that some adolescents may see the power of the tobacco industry as compelling. Thus, although reactance theory would suggest that the highlighting the power and manipulation of the tobacco industry would make adolescents less likely to smoke cigarettes, there may be potential pitfalls associated with this tactic. This same item, however, was associated with reduced odds of susceptibility in the population of nonsmokers. This mixed result highlights the potential pitfall of inadvertently glorifying the tobacco industry in exploring its power, influence, and motivations as part of instructional interventions.

In brief, antismoking media literacy education is complex, multifaceted, and should be appropriately tailored to its goals and the characteristics of its target audiences.

Our study had limitations that deserve mention. First, the study population was drawn from a single large high school. However, our sample's rate of current smoking (19.0%) was similar to those previously reported in national and regional samples,[39] implying that our sample is representative of the larger population. Second, because the high school was racially homogeneous, we did not have enough power to detect racial differences or to conduct subgroup analyses that may have been enlightening. Third, it should be emphasized that we cannot determine causation from a cross-sectional study. Although we would hypothesize that students' media literacy precedes their decisions to smoke, it is also possible that their responses to the media literacy items change after they become smokers and/or susceptible to smoking. It will be important to corroborate these findings and to explore these relationships in longitudinal settings in order to make statements regarding causality. Finally, we relied on self-report of tobacco use. However, students have been shown to be honest when completing anonymous surveys such as this one.[40,41]

In conclusion, this study is the first to our knowledge to examine the specific relationships between different aspects of the multifaceted construct of media literacy and smoking behaviors. This study supports the conclusion that it may be valuable for practitioners to incorporate each of the various domains of media literacy into instruction in order to reduce adolescent smoking, but that particular emphasis may be appropriately placed on teaching in the representation-reality domain. Future investigations should examine the relationship between media literacy and smoking longitudinally and should evaluate the effectiveness of antismoking media literacy interventions in changing both indicators of media literacy and smoking behavior.

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