

# ***Excellence in Prevention*** – descriptions of the prevention programs and strategies with the greatest evidence of success

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## **Name of Program/Strategy: Media Detective**

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### **1. Overview and description**

Media Detective is a media literacy education program for 3rd- to 5th-grade students. The goal of the program is to prevent or delay the onset of underage alcohol and tobacco use by enhancing the critical thinking skills of students so they become adept in deconstructing media messages, particularly those related to alcohol and tobacco products, and by encouraging healthy beliefs and attitudes about abstaining from alcohol and tobacco use. The program consists of 10 45-minute lessons based on established models of decision-making and research on the message interpretation process. Students are taught to deconstruct product advertisements by looking for five "clues": (1) the product, (2) the target audience, (3) the ad hook, (4) the hidden message, and (5) missing information about the health-related consequences of using the product. The program uses a range of pedagogical techniques and can be adapted to a variety of classroom settings and skill levels of students. The Media Detective program kit contains the main materials needed to teach the program, including a teacher manual, poster flipchart, and CD with media examples. Individual student workbooks that accompany the activities taught in each lesson are sold separately. Also available is a comprehensive online training workshop, which provides an introduction to the theory and research underlying the program model and instructions for facilitating each program activity. Those who finish this training and successfully complete assessment tests receive certification as program teachers. Media Detective is related to Media Ready, a media literacy education program for 6th- to 8th-grade students.

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## **2. Implementation considerations (if available)**

## **3. Descriptive information**

<b>Areas of Interest</b>	Substance abuse prevention
<b>Outcomes</b>	1: Media deconstruction skills for alcohol 2: Understanding of persuasive intent of advertising 3: Interest in alcohol-branded merchandise 4: Intentions to use alcohol and tobacco 5: Self-efficacy related to drinking and smoking behaviors
<b>Outcome Categories</b>	Alcohol Social functioning Tobacco
<b>Ages</b>	6-12 (Childhood)
<b>Gender</b>	Male Female
<b>Races/Ethnicities</b>	Data were not reported/available.
<b>Settings</b>	School
<b>Geographic Locations</b>	Suburban Rural and/or frontier
<b>Implementation History</b>	Since its development in 2006, Media Detective has been implemented in an estimated 80 classrooms with approximately 1,900 elementary school-aged students in the United States (mostly in North Carolina). Media Detective has been used in both public and private schools. One evaluation study of the program has been conducted.
<b>NIH Funding/CER Studies</b>	Partially/fully funded by National Institutes of Health: Yes Evaluated in comparative effectiveness research studies: No
<b>Adaptations</b>	No population- or culture-specific adaptations were identified by the applicant.
<b>Adverse Effects</b>	No adverse effects, concerns, or unintended consequences were identified by the applicant.
<b>IOM Prevention Categories</b>	Universal

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## **4. Outcomes**

### **Outcome 1: Media deconstruction skills for alcohol**

<b>Description of Measures</b>	
	<p>Project staff administered a paper-and-pencil questionnaire to students at pre- and posttest. Each question was read aloud to students to account for differences in reading levels. The questionnaire included 6 open-ended items to measure each student's ability to deconstruct an alcohol advertisement:</p> <ul style="list-style-type: none"><li>• "What is being sold in this ad?"</li><li>• "What type of person do you think would like this ad (male or female, kid or adult)?"</li><li>• "What is the purpose of this ad?"</li><li>• "What did the people who made this ad do to make people stop and look at this ad?"</li><li>• "What do they want you to think about this product? Finish this sentence: If I get this product, then..."</li><li>• "Is there anything this ad is not telling you about the product that you would need to know before buying or using it?"</li><li>• The resulting qualitative data were coded by three trained coders, producing scores in seven categories:</li></ul> <p>The product score, which ranged from 0 to 3, captured a student's ability to recognize the product being advertised.</p> <ul style="list-style-type: none"><li>• The target audience score, which ranged from 0 to 3, assessed a student's ability to recognize the target audience of a particular advertisement.</li><li>• The purpose score, which ranged from 0 to 2, assessed a student's understanding that the purpose of the advertisement is to sell products.</li><li>• The ad hook score, which was 0 or 1, assessed a student's understanding of how advertisements attract attention.</li><li>• The hidden message score, which ranged from 0 to 2, assessed a student's ability to recognize implied messages in advertisements.</li><li>• The missing information score, which ranged from 0 to 2, assessed a student's ability to recognize information purposefully omitted from an advertisement.</li></ul>

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	<ul style="list-style-type: none"> <li>The visual elements score, which ranged from 0 to 2, assessed a student's understanding of how advertisers use graphic elements (e.g., font, color, placement of items such as warning labels) to capture attention or to make the product seem more appealing.</li> </ul> <p>The seven scores were summed to create the media deconstruction skills score, which had a possible range of 0-15, with higher scores indicating greater ability to deconstruct the advertisement. Each student's score was calculated as the average of the three coders' scores for that individual. Pretest scores for the outcome variable were included as covariate prediction variables; therefore, outcome variable means were reported as adjusted posttest scores.</p>
<b>Key Findings</b>	At posttest, students in the intervention group had higher mean scores for media deconstruction skills compared with students in the wait-list control group (6.31 vs. 4.59; $p < .0001$ ).
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.4 (0.0-4.0 scale)

### **Outcome 2: Understanding of persuasive intent of advertising**

<b>Description of Measures</b>	<p>Project staff administered a paper-and-pencil questionnaire to students at pre- and posttest. Each question was read aloud to students to account for differences in reading levels. Three items measured students' understanding of the persuasive intent of advertising by asking "how often is this true" for the following statements:</p> <ul style="list-style-type: none"> <li>"Advertisers want you to buy the product even if it isn't good for you to have."</li> <li>"Advertisers care more about making money than about what is good for you."</li> <li>"Advertising doesn't change the way I think."</li> </ul> <p>Students responded using a 6-point Likert scale that ranged from 0 (never) to 5 (always), with higher scores indicating a stronger understanding of the persuasive intent of advertising. Pretest scores for the outcome variable were included as covariate prediction variables; therefore, outcome variable means were reported as adjusted posttest scores.</p>
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<b>Key Findings</b>	At posttest, students in the intervention group had higher mean scores for understanding of the persuasive intent of advertising compared with students in the wait-list control group (3.93 vs. 3.58; $p < .05$ ).
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.5 (0.0-4.0 scale)

### **Outcome 3: Interest in alcohol-branded merchandise**

<b>Description of Measures</b>	Project staff administered a paper-and-pencil questionnaire to students at pre- and posttest. Each question was read aloud to students to account for differences in reading levels. Six items measured each student's interest in alcohol-branded merchandise. Two pictures, one alcohol themed and one soda themed, were presented for each of the 6 items. Each picture was labeled A or B, and students were asked to indicate which one they preferred. Students responded using a 5-point scale that ranged from 1 (I like B a lot more) to 5 (I like A a lot more), with higher scores indicating greater interest in alcohol-branded merchandise. Each student's score for interest in alcohol-branded merchandise was derived from the average of responses across the 6 items. Pretest scores for the outcome variable were included as covariate prediction variables; therefore, outcome variable means were reported as adjusted posttest scores.
<b>Key Findings</b>	At posttest, boys in the intervention group had lower mean scores for interest in alcohol-branded merchandise compared with boys in the wait-list control group (1.56 vs. 1.76; $p < .05$ ). The scores for girls did not differ significantly between groups.
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.6 (0.0-4.0 scale)

### **Outcome 4: Intentions to use alcohol and tobacco**

<b>Description of Measures</b>	Project staff administered a paper-and-pencil questionnaire to students at pre- and posttest. Each question was read aloud to students to account for differences in reading levels. Eight items
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	<p>assessed each student's intention to use alcohol and tobacco:</p> <ul style="list-style-type: none"> <li>• "Before you are 21 years old, do you think you will drink beer, wine, or hard liquor (more than just a few sips)?"</li> <li>• "Before you are 21, do you think you will get drunk or drink a lot of alcohol at one time?"</li> <li>• "Before you are 18 years old, do you think you will smoke cigarettes?"</li> <li>• "Before you are 18 years old, do you think you will chew tobacco or use snuff?"</li> <li>• "During the next year, do you think you will drink beer, wine, or hard liquor (more than just a few sips)?"</li> <li>• "During the next year, do you think you will get drunk or drink a lot of alcohol at one time?"</li> <li>• "During the next year, do you think you will smoke cigarettes?"</li> <li>• "During the next year, do you think you will chew tobacco or use snuff?"</li> </ul> <p>Students responded using a 4-point Likert scale that ranged from 0 (I definitely will not) to 3 (I definitely will). Scores for intentions to use alcohol and tobacco were derived from the average of responses across the 8 items, with higher scores indicating a stronger intention to use alcohol and tobacco. Pretest scores for the outcome variable were included as covariate prediction variables; therefore, outcome variable means were reported as adjusted posttest scores.</p>
<b>Key Findings</b>	At posttest, among students who had previously used alcohol and tobacco, those in the intervention group had lower mean scores for intentions to use alcohol and tobacco compared with those in the wait-list control group (0.30 vs. 0.41; $p < .05$ ). The scores for students who had not previously used alcohol or tobacco did not differ significantly between groups.
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.5 (0.0-4.0 scale)

### **Outcome 5: Self-efficacy related to drinking and smoking behaviors**

<b>Description of Measures</b>	Project staff administered a paper-and-pencil questionnaire to
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	<p>students at pre- and posttest. Each question was read aloud to students to account for differences in reading levels. Four items assessed each student's self-efficacy and feelings of personal control in regard to drinking and smoking behaviors by asking "how often is this true" for the following statements:</p> <ul style="list-style-type: none"> <li>• "I feel like I have to drink beer or other alcoholic drinks."</li> <li>• "I feel like I have to smoke cigarettes."</li> <li>• "I would feel like I had to drink beer or other alcoholic drinks if my friends were drinking."</li> <li>• "I would feel like I had to smoke cigarettes if my friends were smoking."</li> </ul> <p>Students responded using a 6-point Likert scale that ranged from 0 (never) to 5 (always). Scores were then reverse coded so that higher scores indicated higher levels of self-efficacy. Scores for self-efficacy in regard to the use of alcohol and tobacco were derived from the average of responses across the 4 items.</p> <p>Pretest scores for the outcome variable were included as covariate prediction variables; therefore, outcome variable means were reported as adjusted posttest scores.</p>
<b>Key Findings</b>	<p>At posttest, students in the intervention group had higher mean scores for self-efficacy compared with students in the wait-list control group (4.79 vs. 4.69; <math>p &lt; .05</math>). Among students who previously used alcohol or tobacco, those in the intervention group had higher mean scores for self-efficacy compared with those in the wait-list control group (4.73 vs. 4.50; <math>p &lt; .05</math>). The scores for students who had not previously used alcohol or tobacco did not differ significantly between groups.</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.7 (0.0-4.0 scale)

**5. Cost effectiveness report (Washington State Institute of Public Policy – if available)**

**6. Washington State results (from Performance Based Prevention System (PBPS) – if available)**

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## **7. Who is using this program/strategy**

<b>Washington Counties</b>	<b>Oregon Counties</b>

## **8. Study populations**

The studies reviewed for this intervention included the following populations, as reported by the study authors.

<b>Study</b>	<b>Age</b>	<b>Gender</b>	<b>Race/Ethnicity</b>
<b>Study 1</b>	6-12 (Childhood)	50.7% Female 49.3% Male	Data not reported/available

## **9. Quality of studies**

The documents below were reviewed for Quality of Research. Other materials may be available. For more information, contact the developer(s).

### **Study 1**

Kupersmidt, J. B., Scull, T. M., & Austin, E. W. (2010). Media literacy education for elementary school substance use prevention: Study of Media Detective. *Pediatrics*, 126(3), 525-531.

### **Supplementary Materials**

Kupersmidt, J. B., & Barrett, T. M. (2010). *Media Detective*. Durham, NC: innovation Research and Training.

### **Quality of Research Ratings by Criteria (0.0-4.0 scale)**

External reviewers independently evaluate the Quality of Research for an intervention's reported results using six criteria:

1. Reliability of measures
2. Validity of measures
3. Intervention fidelity
4. Missing data and attrition
5. Potential confounding variables
6. Appropriateness of analysis

For more information about these criteria and the meaning of the ratings, see [Quality of Research](#).



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<b>Outcome</b>	Reliability of Measures	Validity of Measures	Fidelity	Missing Data/Attrition	Confounding Variables	Data Analysis	Overall Rating
<b>1: Media deconstruction skills for alcohol</b>	1.5	2.5	2.8	2.8	2.4	2.5	2.4
<b>2: Understanding of persuasive intent of advertising</b>	2.3	2.3	2.8	2.8	2.4	2.5	2.5
<b>3: Interest in alcohol-branded merchandise</b>	2.3	2.8	2.8	2.8	2.4	2.5	2.6
<b>4: Intentions to use alcohol and tobacco</b>	2.3	2.3	2.8	2.8	2.4	2.5	2.5
<b>5: Self-efficacy related to drinking and smoking behaviors</b>	2.8	3.3	2.8	2.8	2.4	2.5	2.7

### **Study Strengths**

The internal consistency and face validity of the scales were acceptable, and there was some evidence of concurrent validity. Teachers completed a fidelity checklist after each lesson, and program staff provided fidelity ratings for the lessons they observed, which indicated a relatively high level of fidelity. Attrition and missing data were minimal. The analytic strategy of using a hierarchical linear model was appropriate.

### **Study Weaknesses**

Test-retest and inter-rater reliabilities were not provided, and no evidence of construct or predictive validity was given. Only 20% of the lessons were observed, and no information was provided about teachers' self-reported ratings for the unobserved lessons. It is unclear whether there was differential attrition across treatment groups or across classrooms. The analysis did not account for nesting at the school level.

## **10. Readiness for Dissemination**

The documents below were reviewed for Readiness for Dissemination. Other materials may be available. For more information, contact the developer(s).

### **Dissemination Materials**

Innovation Research and Training. (2006). Media Detective notebook: Grade 3. Durham, NC: Author.

Innovation Research and Training. (2006). Media Detective notebook: Grades 4 and 5. Durham, NC: Author.

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Innovation Research and Training. (2006). Media Detective poster flipchart. Durham, NC.

Innovation Research and Training. (2006). Media Detective teacher manual: An evidence-based media literacy substance abuse prevention program, elementary school, grades 3-5. Durham, NC.

Media Detective Web site, <http://www.irtinc.us/products/mediadetective/index.html>

Web-based teacher training program, [http://irtprevention.com/about\\_mdtt.htm](http://irtprevention.com/about_mdtt.htm)

## **Readiness for Dissemination Ratings by Criteria (0.0-4.0 scale)**

External reviewers independently evaluate the intervention's Readiness for Dissemination using three criteria:

1. Availability of implementation materials
2. Availability of training and support resources
3. Availability of quality assurance procedures

For more information about these criteria and the meaning of the ratings, see Readiness for Dissemination.

<b>Implementation Materials</b>	<b>Training and Support Resources</b>	<b>Quality Assurance Procedures</b>	<b>Overall Rating</b>
3.5	3.5	3.4	3.5

## **Dissemination Strengths**

The teacher manual is well organized and follows a clear, logical sequence. The manual's pages include a sidebar that lists the lesson components and highlights where the user is within the lesson. Implementation materials include optional homework assignments to enhance students' learning. The Web-based training is well aligned with the content of the teacher manual and includes session-by-session assessments of what has been learned. At the end of the training, participants who successfully complete the assessment tests are certified as program teachers. A fidelity checklist with a rating scale helps teachers assess how well they followed the fidelity instructions, which are provided for each session.

## **Dissemination Weaknesses**

Little guidance is provided on optimal class size and methods for incorporating the program into existing classroom curricula. It is unclear how implementers access support, if needed, for the Web-based training. Little information is provided on how an implementer should administer the fidelity checklist and interpret its results.

## **11. Costs (if available)**

The information below was provided by the developer and may have changed since the time of review.

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For detailed information on implementation costs (e.g., staffing, space, equipment, materials shipping and handling), contact the developer.

<b>Item Description</b>	<b>Cost</b>	<b>Required by Program Developer</b>
Curriculum kit (includes teacher manual, poster flipchart, CD of media examples, notebook for grade 3, notebook for grades 4 and 5, and one sample bookmark)	\$210 each	Yes
CD of media examples	\$5 each	No
Overhead transparencies of media examples	\$58 per set	No
Notebooks (grade 3 or grades 4 and 5)	\$24 for 10	Yes
Bookmarks	\$3.75 for 30	No
1-year license for on-demand, Web-based teacher training (includes teacher certification test)	\$75 per participant	No
1-day, on-site teacher training workshop (includes teacher certification test)	\$2,800 for up to 25 participants, plus travel expenses	No
Limited phone and email consultation	Free	No
Pre- and posttest outcome assessment instruments	Free	No
Fidelity checklists	Free	No
Implementation design and monitoring consultation	\$175 per hour	No
Evaluation services consultation	\$175 per hour	No
Contractual evaluation services	Varies depending on the number of participants, types of services, and number of evaluation reports needed	No

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## **Additional Information**

The ongoing costs of program implementation are optional and include the purchase of a notebook and a bookmark for each student.

## **12. Contacts for more information**

### **For information on implementation:**

Tracy Scull, Ph.D.  
(919) 493-7700  
tscull@irtinc.us

### **For information on research:**

Janis Kupersmidt, Ph.D.  
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jkupersmidt@irtinc.us

**Learn More by Visiting:** <http://www.irtinc.us/products/mediadetective/index.html>