Measurement issues in media literacy: Research development of measures grounded in behavior change and persuasion theory

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1. Introduction

- Media literacy programs typically include discussion of persuasive media strategies, analysis of sample messages, and sometimes the planning and/or production of messages.
- Media literacy interventions can help increase youth’s understanding of persuasive intent, change their attitudes toward unhealthy behaviors, and begin evoking values of critical viewing of television (e.g., Austin et al., 2007; Gonzalez et al., 2004; Pinkleton et al., 2007)
- More broadly, media literacy interventions teach critical thinking and counter-arguing skills to empowere and make them less vulnerable to persuasive messages
- Media literacy workshops on drinking and cigarette smoking show favorable results (e.g., reductions in use of tobacco, alcohol, other drugs (ATOD) related attitudes, intentions, and behavior) for elementary and middle school children (e.g., Austin & Johnson, 1997; Austin et al., 2003; Banerjee & Greene, 2007; Bergnas & Ingram, 2001; Slater & Rouner, 1996). Other substance use prevention programs have adopted boosters based on media literacy principles (e.g., Hecht et al., 2003).
- A major critique of media literacy programs is the lack of understanding of the causal process (or processes) through which media literacy interventions influence attitudes, beliefs, and behaviors of its target audience. It is important to explain how these changes occur to fully understand and meaningfully refine interventions (DeZorzi & Lipsey, 2002). Developing adequate measures of mediators of the causal process is crucial to this understanding.

- This poster describes the analysis of a set of measures of proposed process mediators of the impacts of media literacy programs, namely involvement, novelty, perceived gain, and reflectiveness.

2. Methods

- Participants: 300 10th-grade high school students (14-16 years old)
- From across Pennsylvania (representing rural, suburban, and urban school districts)
- Gender: 51.4% Male
- Race/ethnicity: 63% White, 16% Hispanic, 13% Black, 3% Native American, 3% Asian/Other
- Age: 15.7 ± 1.0 years
- Pilot test of a 75-minute media literacy curriculum (the Youth Message Development Curriculum). In addition to a discussion of advertising persuasion techniques, production features, alcohol ads, and counter-arguments, half of the students participated in a poster planning session (production) while the other half engaged in a control activity involving reframing for a maturity factor analysis. Four message evaluation factors were confirmed by Principle Component Analysis (PCA) and Convergent Factor Analysis (CFA), and they demonstrated acceptable reliability as scales. We discuss the implications of measuring process effects of media literacy campaigns and propose further refinements to the measures to move the field forward.

3. Results

- At the individual level, the scale items displayed a normal distribution of responses (as reflected by skewness and kurtosis indicators). The measures also reflected hypothesized differences between pre and post workshop sessions.
- Four message evaluation factors were confirmed by PCA and CFA, with variance explained ranging from .35/67 to 7.8%.
- Involvement χ2(1) = 2.20, p = .14, CFI = .99, RMSEA = .05
- Perceived Gain χ2(1) = 1.87, p = .17, CFI = .99, RMSEA = .05
- Second Order Factor for all four scales χ2(6) = 18.83, relative χ2 = 2.78, p = .001, CFI = .95, RMSEA = .08
- The four factors reflected important mediators of media literacy interventions, namely involvement in the intervention, perceived novelty and reflectiveness.
- The four scales demonstrated excellent internal consistency with Cronbach’s α ranging from .75 to .85.

4. Discussion

- These measures are under further refinement through a current feasibility test of the brief media literacy curriculum.
- Measures can be a critical feature of advancing understanding of processes through which media literacy interventions change, to date widely understudied in this area.
- Additional steps include refinement of measures of advertising effects, grounded substance use prevention, and, behavioral intention.

References


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*This publication was supported by grant number R21 DA027146 from the National Institute on Drug Abuse to Rutgers University (grant recipient), Kathryn Greene, Principal Investigator. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Institutes of Health.

Table 1 - Summary of Workshop Evaluation Measurement Data

<table>
<thead>
<tr>
<th>Scale/item</th>
<th>Mean (SD)</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td></td>
<td>ρ = .85</td>
</tr>
<tr>
<td>- The workshop was interesting to me.</td>
<td>3.78 (.79)</td>
<td></td>
</tr>
<tr>
<td>- I got easily distracted during the workshop.</td>
<td>3.44 (.79)</td>
<td></td>
</tr>
<tr>
<td>- I enjoyed the workshop.</td>
<td>3.46 (.79)</td>
<td></td>
</tr>
<tr>
<td>- The workshop was boring.</td>
<td>3.61 (.79)</td>
<td></td>
</tr>
<tr>
<td>Perceived Gain</td>
<td></td>
<td>ρ = .87</td>
</tr>
<tr>
<td>- How much did the workshop make you think about the impact of advertising on you personally?</td>
<td>3.08 (.63)</td>
<td></td>
</tr>
<tr>
<td>- How much did the workshop make you think about the impact of advertising on your peers?</td>
<td>3.08 (.62)</td>
<td></td>
</tr>
<tr>
<td>- How much did the workshop make you think about how peer pairs use alcohol?</td>
<td>2.14 (.34)</td>
<td></td>
</tr>
<tr>
<td>Novelty</td>
<td></td>
<td>ρ = .81</td>
</tr>
<tr>
<td>- The workshop was just like what we normally do in school.</td>
<td>3.45 (.79)</td>
<td></td>
</tr>
<tr>
<td>- I’ve never done anything like what we did in the workshop today.</td>
<td>2.43 (.72)</td>
<td></td>
</tr>
<tr>
<td>- The workshop was different from regular school classes.</td>
<td>3.15 (.85)</td>
<td></td>
</tr>
<tr>
<td>Reflectiveness</td>
<td></td>
<td>ρ = .79</td>
</tr>
<tr>
<td>- This workshop made me think about the impact of advertising on you personally.</td>
<td>3.46 (.65)</td>
<td></td>
</tr>
<tr>
<td>- The messages in the workshop made me think about the content of all claims.</td>
<td>3.79 (.83)</td>
<td></td>
</tr>
<tr>
<td>- The messages in the workshop made me think about the truthfulness of all claims.</td>
<td>3.88 (.85)</td>
<td></td>
</tr>
</tbody>
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