Effect of Web-based Interactive Tailored Health Videos on Users’ Attention, Interactivity, Overall Evaluation, Preference and Engagement

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ABSTRACT
Web-based interactive tailored approaches hold much promise as effective means for delivering health education and improving public health. This study examines the effects of web-based interactive tailored health videos on attention, interactivity, overall evaluation, preference and engagement to health messages using a survey questionnaire. Sixty-eight college students were randomized to examine one of two conditions: a web-based interactive tailored health video or a static site on the same health topic. A survey questionnaire examined participants’ self-reported perceptions about their viewing experience including: attention, interactivity, overall evaluation, preference, and engagement. Results show that the attention, interactivity, overall evaluation, preference and engagement were significantly higher when viewing the web video compared to when viewing the static site, indicating greater scores, which was confirmed by the self-reported data. These results suggested that interactive tailored health intervention programs achieved a relatively greater effect on attention, interactivity, overall evaluation, preference and engagement indicated by self-report, when compared to static message delivery.

Keywords
Web-based, interactive tailored health video, static website

INTRODUCTION
Interactive video is a particularly promising tool that can generate tailored and cognitively engaging messages using a conversational approach. Interactivity allows users to participate and modify the given content and form of the information, resulting in a patient specific message that is formulated in real time (Steuer, 1992, p. 14). Recent advances in the technology now allow increasingly deeper levels of personalization by supporting the generation of unique messages matching individuals’ characteristics and by targeting variables important for encouraging behavior change (Kreuter, Farrell, Olevitch, & Brennan, 2000). When the message is interactively tailored to the specific needs of the recipient, it is more likely to be relevant for that receiver, and as a result, the message stimulates the receiver to think more thoughtfully about the topic. This ability to interactively tailor a message is one of the major advantages of web-based communications, as compared to standard paper-based or asynchronous modes of message delivery. Advances in computer and information technology allow numerous opportunities to 1) increase user involvement with health content, 2) present information in a number of formats, and 3) elicit user feedback. In combination, these three factors dramatically improve the conditions needed for effective persuasion to occur.

RESEARCH QUESTIONS
This study examines the effects of interactive tailored health videos on attention, interactivity, overall evaluation, preference and engagement to health messages using a survey questionnaire: How will participants rate the interactive video approach compared to the static website approach on the following measures: attention, interactivity, evaluation, preference, and engagement?

PURPOSE OF THE STUDY
The purpose of this research effort is to study the effects of web-based interactive tailored health videos on users’ attention, interactivity, overall evaluation, preference and engagement. Particularly, the health video deals with the topic of sexually transmitted disease (STD). STD education is a sensitive but critical topic for younger generations who are facing a new and unfamiliar experience related to sexual decision making. This experience is particularly applicable to college students, who constitute the main participants of this study. These statistics indicate that the younger generations are at higher risk of STD exposure (Grunbaum, et al., 2004). Interactive approaches are particularly appropriate for delivering health messages to younger audiences. The youth are not only more technologically savvy as information seekers, but they may also be more likely to be receptive to and effectively influenced by more interactive approaches compared to static and generic
approaches. In terms of effective STD-related sex education, the interactive tailored health video could offer the most effective means to educate the young generation about sex education in online environments. In the interactive tailored health video, the automated interaction between computer and human creates an environment in which the user feels safe to discuss sensitive issues, while feeling confident in the quality of the content provided, when seeking knowledge about STD-related health issues.

METHOD
At total of 68 participants were undergraduate students at Florida State University. The researcher gave the participants a scenario in which they had to imagine that they have just been diagnosed with a sexually transmitted disease and do not have enough knowledge about the disease. The first screen of the website was a survey to collect participants’ basic demographic and personality variables. In the first session, the participants were exposed to the web video. After completing the first session, the participants were then exposed to the static website. All personal information was anonymous. Each session took no more than twenty minutes for the participants to complete. Between the first and second sessions, participants were asked to evaluate their website experience including perceptions about the site’s interactivity and overall acceptability; their personal attention to and engagement in each website, as well as their behavioral intentions after exposure to the sites. After each participant had been exposed to the web video and static conditions, a final survey questionnaire (self-report) was given to allow for a comparison between the web video and static sites.

Statistical analysis was performed using SPSS for Windows version 18.0. A paired samples t-test was used to compare web-based interactive health video and static groups on self-report data (attention, interactivity, overall evaluation, preference, and engagement). The paired samples t-test was reposted as mean +/- SD. Significance was set at alpha < 0.05.

RESULTS
Figure 1 summarizes the participants’ self-reported evaluations of their online experience with the web video and static sites. The participants rated the web video significantly higher compared to the static website on the following variables: attention, interactivity, overall, preference and engagement (p < 0.05).

CONCLUSION
Modern health intervention programs are making use of recent technological advances to deliver health messages that are interactive and that provide content specifically tailored for individual users. These tailored health intervention programs have been found to be effective in delivering public health messages (Hawkins, Kreuter, Resnicow, Fishbeinm, & Dijkstra, 2008). Multimedia video presentation and gaming style interactions are just two of the latest technologies being adopted to produce a diverse array of health education and health information tools.

Health interventions that use interactive and tailored technologies are potentially more effective tools for improving individuals’ health knowledge, attitude, motivation, and for promoting healthier behaviors among users (Kreuter & Wray, 2005). These approaches are known not only improve the delivery of health information, but do so in a way that promotes the user’s engagement by enhancing the cognitive processing of the health messages. Participants rated the web video significantly higher compared to the static website on the following variables: attention, interactivity, and overall evaluation. Moreover, a greater proportion of participants preferred the web video over the static website and found the web video to be more engaging than the static website. It is not surprising that participants indicated that the health messages from the web video were more interactive and enhanced their attention compared to static intervention programs. The web video message is designed for a college student audience with the goal of educating viewers about sexually transmitted disease (STDs) and is presented as a human conversation. The human-like conversational style of this type of intervention might help to enhance the individual’s attention and engagement. This is in line with previous research that shows that multi-media and highly interactive presentation styles are preferred by and found to be more engaging to younger audiences, the so-called digital natives (Prensky, 2001). These multi-media types of health intervention approaches were found to be more readily accepted by different types of audiences, when compared to static and non-tailored health intervention approaches (Neuhauser & Kreps, 2003). However, as the goal of health intervention programs is to encourage healthier behaviors, additional follow-up research will need to examine the overall efficacy of interactive tailored health message delivery from the perspective of obtaining actual healthier outcomes.

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REFERENCES


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