

Responses to HIV Public Service Announcements: The Mediating Role of Attitude toward the Ad and Source Identification

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Abstract: This study examined the underlying psychological process of participants' evaluation of source ethnicity and expertise on their acceptance of a public service announcement (PSA). This study proposed the effects of source evaluation were mediated by source identification and attitude toward the ad (A_{ad}). Five hundred and twenty-two participants responded to a number of questions after they viewed one HIV public service announcement. Results found that A_{ad} and source identification mediated the effects of source credibility and similarity on message acceptance.

Keywords: Intercultural communication, source effects, ethnicity, identification, public service announcement

1. Introduction

As the demographics of the United States and many other countries continue to change, health promotion among ethnic populations is increasing in frequency and becoming more sophisticated. Early research found that ethnic consumers (e.g., Blacks) generally responded more favorably to advertisements featuring an ethnically similar source than one featuring an ethnically dissimilar source (Whittler, 1991). Research in the past few decades continued to examine the effects of source ethnicity on other ethnic groups' evaluation of persuasive messages or marketing communications (e.g., Dimofte, Forehand & Deshpande, 2003; Martin, Lee & Yang, 2004; Webster, 1994) and to explore additional variables that contribute to our understanding of ethnic consumers' evaluation of advertisements, such as consumer self-referencing and ethnic identification (Arpan, 2002; Deshpande, Hoyer, & Stayman, 1986; Sobh & Soltan, 2016). A number of theoretical explanations were proposed and tested regarding the ethnicity effects, such as ethnicity as a heuristic cue (Whittler, 1989) and the distinctiveness of participants' ethnicity or situational states of ethnic salience (Hoplamazian & Appiah, 2013; Stayman & Deshpande, 1989). However, these theoretical explanations do not examine the underlying process that source cues may be related to ethnic consumers' evaluation of advertising messages.

This study was designed to address this void and adopted identification theory (Kelman, 1961) and attitude toward the ad (A_{ad} ; McKenzie & Lutz 1989) as the overarching theoretical frameworks. The objectives of the study are as follows: First, this study seeks to identify the characteristics of a source that may influence consumers' evaluation of a message. Second, this paper explores the underlying dual-process through which those characteristics may be related to consumers' responses to persuasive messages.

1.1. Source Ethnicity and Persuasion

Ethnicity is defined as “people who perceive themselves as constituting a community because of common culture, ancestry, language, history, religion, or customs” (Riggins, 1992, p. 1) and is one significant cue for audiences to assess their similarity level with a source. In a review of research on the effects of ethnic similarity on attitude change, Arpan (2002) summarized that perceived physical appearance or speech characteristics of a source can influence an audience’s reaction to the source. Previous research found that ethnic audiences (e.g., Blacks) respond more favorably to the spokespersons and advertising messages when the ads feature spokespersons of the same ethnicity (e.g., Pomales, Caliborn, & LaFromboise, 1986; Whittler, 1989), whereas whites react to actors’ occupational or social status (Hoplamazian & Appiah, 2013; Whittler, 1991). Sierra, Hyman, and Heiser (2012) performed a meta-analysis on the role of ethnic identity in advertising and found that participants’ ethnic identity, which is stronger among ethnic minorities, can influence how ethnic minorities respond to an advertising message (e.g., A_{ad}). In general, ethnic minorities prefer spokespersons of the same ethnicity. However, it is important to further examine the process whereby ethnic consumers’ assessments of a source influence their source identification and responses to an advertisement.

Source credibility has several underlying conceptual dimensions. Based on the early work (e.g., Hovland & Weiss, 1951; McGuire, 1985), Ohanian (1990; 1991) conceptualized source credibility based on source expertise, source trustworthiness, and source attractiveness, and used the three-dimension construct to measure the effectiveness of celebrity endorsers. Ohanian (1991) and Sternthal et al. (1978) observed that perceived expertise of celebrities was a significant factor in explaining respondents’ acceptance of a message or intentions to purchase. Ohanian’s research also revealed that trustworthiness was not a significant factor in explaining consumers’ evaluation of a message. Yalch and Elmore-Yalch (1984), however, found that a trustworthy source influenced message acceptance. The effects of attractiveness have also been examined by several studies (e.g., Baker & Churchill, 1977; Harmon & Coney, 1982; Sternthal, Dholakia & Leavitt, 1978). For example, Baker and Churchill found that an attractive model had a positive effect on the audience’s affective evaluations of ads, but not on their purchase intention.

1.2. Identification Theory

At the theoretical level, Kelman’s (1958, 1961) identification theory and the model of attitude toward the ad (A_{ad}) can be used to explain the effects of source credibility. Identification theory states that attitude or behavioral change goes through three steps: compliance, identification, and internalization. Compliance refers to the power a communication source has over the audience or the power the target audience perceives. The audience then will engage in certain behaviors in order to gain approval or rewards from the source. However, communication or other social sciences disciplines typically do not focus on the effects of compliance (Wilson & Sherrell, 1993). The identification stage involves a situation when individuals identify themselves with the source based on the similarities they observe from the communication source. By identifying themselves with the source, individuals hope to establish or maintain

a relationship with the source. That relationship is typically associated with a satisfying self-defining relationship. In the internalization stage, the members of the target audience may accept or internalize the beliefs or influence of the source if they perceive the source possesses similar physical traits or values or if they identify with the source.

Although Kelman did not apply this theory to advertising or communication research, several communication scholars used the theory to explain the mechanism why celebrities or source ethnicity can influence ethnic consumers' evaluation of persuasive messages. In the case of source ethnicity, the audience assesses their level of similarity with a source during an interaction and searches for other similarity cues after identifying with the source on certain aspects (Whittler, 1991), and the individual may further internalize the beliefs advocated by the source.

When examining the influence of celebrities on young adults' sexual beliefs, attitudes, and behaviors, Basil (1996) found that identification with Magic Johnson was significantly associated with personal concern ($B = 0.17, p < .05$) and intention to change high-risk sexual behaviors ($B = 0.22, p < .01$). Identification, however, did not predict the perceived risk or intention to get a blood test. The above four dependent variables were summed as an overall sexual behavior scale. Further path analysis revealed that identification mediated the effects of knowledge of Magic Johnson, TV exposure, age, and the number of partners on participants' sexual behavior.

1.3. Attitude toward the Ad

Another possible route that source characteristics will influence participants' acceptance of an advertising message is through attitude toward the ad (A_{ad}), defined as "a predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion" (Lutz, 1985). A_{ad} has its roots in Fishbein's (1967) attitude theory and is considered as an evaluative or affective measure of attitudes.

A number of empirical studies have documented the significant explanatory power of A_{ad} and the construct of A_{ad} as a mediator of advertising effectiveness (Mitchell & Olson 1981; Batra & Ray, 1986; MacKenzie & Lutz, 1989; Bruner & Kumar, 2000). In most studies, advertising effectiveness was operationalized as attitude toward the brand, purchase intention, or both. The majority of the studies focused on A_{ad} as a causal mediating variable in the process through which advertising influences brand attitudes and purchase intentions. Studies found a strong, positive relationship between A_{ad} and brand attitude, which may further influence consumers' purchase intentions. The relationship between the antecedents and A_{ad} is hypothesized to be nonzero only under the pure affect transfer situation when participants are in a low message involvement and low ad execution involvement. MacKenzie and Lutz (1989) outlined a framework of A_{ad} antecedents. Relevant to source ethnicity research is that the affective evaluation of advertiser or source credibility may lead to A_{ad} formation.

Although previous research examined the relationship between source similarity/credibility and advertising effectiveness, few studies have examined which dimensions of source credibility (i.e., expertise, attractiveness, or trustworthiness) are related to participants' acceptance of a message featuring spokespersons of different ethnicity and whether such a

relationship is mediated by A_{ad} . Furthermore, it is not clear whether the relationship between source credibility and message acceptance is mediated by source identification. Thus, this study aimed to examine the dual mediating variables on participants' acceptance of a message featuring sources of different ethnicities. Formally, the study asked the following research questions:

RQ1: What dimensions of perceived source ethnicity are related to audience's acceptance of an advertising message?

RQ2: Are the relationships between the three dimensions of source credibility and message acceptance mediated by source identification and/or A_{ad} ?

2. Method

2.1. Data Collection

Data were collected through an experimental study which attempted to explore how White and Black audiences reacted to source ethnicity and occupation. This experiment employed a 2×2 between-subjects factorial design. Both independent variables were experimentally manipulated (White vs. Black models; medical doctors vs. non-doctors). Only male spokespersons were selected to avoid introducing an additional factor (i.e., gender). Booklets containing an informed consent form, a print public service announcement with one of the four spokespersons, and a questionnaire were randomly distributed among students from various classes. Participants were told that they would evaluate a draft public service announcement (PSA), which would help researchers to improve the look, style, and content of the PSAs. The participants were also instructed not to talk or observe others' work. The researcher debriefed the participants after collecting all the questionnaires.

2.2. Participants

Participants were recruited from communication classes at a large research university in the Southeastern United States, and in chemistry, physics, criminology, and biology classes at a traditional Black university in the same area. Participants from the communication classes were given extra credit for participation or completed the experiment as part of their course requirement. A total of 532 questionnaires were retained after deleting those who classified themselves as non-white or non-Black. Among those subjects, 90 were White males, 80 were Black males, 186 were White females, and 176 were Black females. The average age of the sample is 21.2 years ($SD = 1.9$). A one-way ANOVA test indicated no age difference among the four groups ($F_{3,528} = 2.40, p = .07$).

2.3. Stimuli

Four black-and-white, print PSAs were developed. The PSAs were 4 by 6 inches in size. The message informed the audiences of statistics about the number of Americans living with AIDS/HIV, informed the participants of the danger of unprotected sexual behaviors, and promoted

condom use. The content of the message was the same across four PSAs. The message contained three paragraphs and is as follows:

In the United States, about 1 million people are living with HIV/AIDS – 1 in 250 Americans. Young people aged 18 to 25 are most likely to be infected.

AIDS is not curable. But it is preventable. Used correctly and consistently, condoms can prevent HIV infection and save lives.

You cannot tell from a person if he or she is infected. But you have the choice to use condoms.

At the end of the message, the tagline read: Be Safe, Use Condoms.

The only difference among the PSAs was that each of these four PSAs used a different spokesperson (two Blacks and two Whites), which was placed on the left side of the PSA. Only male spokespersons were chosen. Two of the four models were dressed in a white coat to indicate that they were medical doctors. These models were selected from 12 photos after a pretest among another sample of 82 participants who were similar to those in the main sample. These spokespersons were rated as equally attractive by participants of their own ethnicity. For example, the White doctor model was rated as equally attractive by White participants as the Black doctor model by Black participants. A more detailed discussion of this experimental manipulation and effects of this manipulation can be found in Wang and Arpan (2008).

Because this research aimed to examine the mediating relationships, it was important to make sure that there were some variations in the independent variables, which were then used to predict source identification, A_{ad} , and message acceptance. Results showed this experimental manipulation induced some variations in participants' evaluation of source credibility (i.e., attractiveness, expertise, and trustworthiness): Means ranged from 3.62 to 5.02, and standard deviations for these means ranged from 1.03 to 1.58.

2.4. Measures

The study includes the following measures: perceived similarity with a source, three dimensions of source credibility, source identification, A_{ad} , and message acceptance.

Similarity with a source was measured by asking students to rate their perceptions of the degree of similarity with the source in the PSAs in terms of overall lifestyle, cultural background, dress, appearance, and basic values (Whittler, 1989). For this scale, coefficient alpha was .73. Source credibility was measured using three 5-item bipolar semantic differential scales adapted from Ohanian's (1990, 1991) research to capture the three main factors in source credibility and the Cronbach alphas for the scales are .93 for trustworthiness, .92 for expertise, and .84 for attractiveness.

Source identification was measured by asking subjects to indicate how strongly they agreed with seven statements on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). These statements were adapted from Basil (1996), e.g., "I like the person featured in the public

service announcement,” and “I can easily relate to the spokesperson.” Coefficient alpha for the scale is .71. To capture both the affective and evaluative content of the PSA, a nine-item 7-point semantic differential scale was adapted from MacKenzie and Lutz (1989): good/bad, pleasant/unpleasant, enjoyable/ not enjoyable, classy/ not classy, irritating/ likeable, believable/ not believable, well designed/ poorly designed, interesting/ uninteresting, informative/ not informative. The nine-item scale exhibited an alpha of .91.

For message acceptance, respondents were asked to indicate their agreement with eight statements about the PSA which were adapted from a scale used to evaluate HIV videotapes (Herek et al., 1998). The scale had a reliability coefficient of .90 and included “The public service announcement gave correct information about HIV,” “I agree with what the public service announcement said about HIV.” Scale values ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

A single-item measure was used to assess students’ estimation of their chances of contracting the HIV virus. Responses ranged from 1 to 7. Students were asked to write the occupation of the spokesperson at the end of the questionnaire. Hypothesis guessing was measured by asking the subjects to write down what they think about the true purpose of the experiment at the end of the questionnaire. The specific question is: “In your opinion, what was the purpose of the study?” No students guessed the purpose of the study. Demographic information of the participants, such as age, gender, and race, was obtained at the end of the questionnaire.

3. Results

Data analysis combined respondents from the four message conditions. The main purpose of the present analysis was to assess the psychological process of source ethnicity and A_{ad} on message acceptance. It was assumed that the underlying process of how participants form or change their attitudes was the same regardless of the experimental conditions; that is, the initial favorable responses toward the spokesperson may lead to a stronger identification or more favorable A_{ad} , and vice versa. Combining different conditions offered a quick reference to the study’s results and provided path analysis with a relatively large sample size.

Two path models were tested: one for the White sample and one for the Black sample (Figures 1 and 2). The final model for the White sample fit the data well: $\chi^2(5) = 2.76, p = .74$, root mean square error of approximation (RMSEA) $< .001$, and comparative fitness index (CFI) = 1.00. The path model for the Black sample fit the data well, $\chi^2(5) = 8.15, p = .15$, RMSEA $< .05$, and CFI = .996. Those two tests showed overall good fit for the final models.

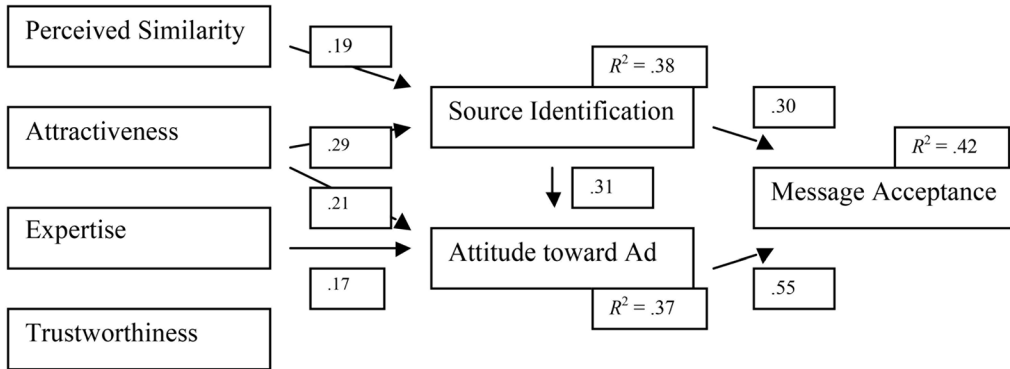


Figure 1. Path Model for the White Sample (all coefficients are significant, $z > 2$). $\chi^2(5) = 2.76, p = .74, RMSEA < .001$, and $CFI = 1.00$. Trustworthiness was not associated with A_{ad} or source identification and was not included in the final analysis.

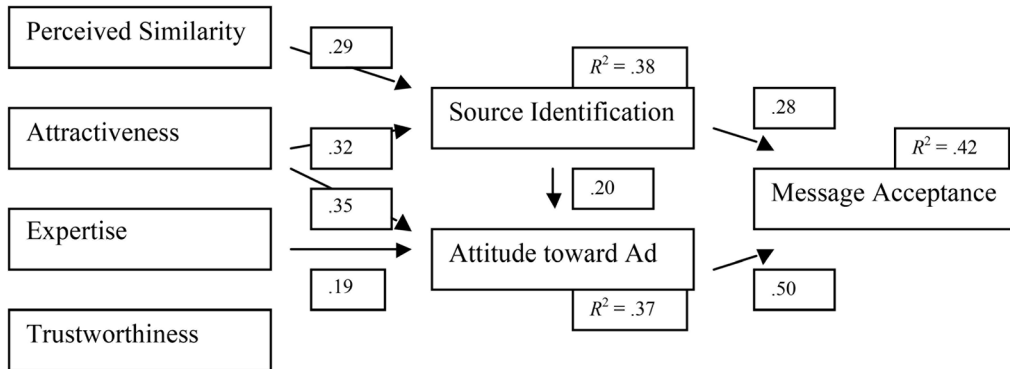


Figure 2. Path Model for the Black Sample (all coefficients are significant, $z > 2$). $\chi^2(5) = 8.15, p = .15, RMSEA < .05$, and $CFI = .996$. Trustworthiness was not associated with A_{ad} or source identification and was not included in the final analysis.

The first research question asked if any of the perceived attributes of the source were related to message acceptance. The model for the White sample showed that the perceived similarity with the source, attractiveness and expertise dimensions of the source had total effects of .09 ($p < .05$), .25 ($p < .05$), and .09 ($p < .05$) respectively. The Black sample showed similar statistics: perceived similarity ($\beta = .11, p < .05$), attractiveness ($\beta = .30, p < .05$), and expertise ($\beta = .10, p < .05$). The results supported the proposed relationship that the participants were more likely to accept a message when they perceived the source to be more similar to them, more attractive, and more expert. The trustworthiness dimension was not correlated with source identification or A_{ad} in the initial models and was dropped from the final models.

The second research question asked if source identification and/or A_{ad} mediated the effects of perceived attributes of the source on message acceptance. The model for the White sample

indicated that the perceived attributes of the source did not have a direct relationship with message acceptance. Those variables had indirect relationships with message acceptance through source identification and A_{ad} . More specifically, perceived similarity and perceived attractiveness were positively associated with source identification ($\beta = .19, p < .05$; $\beta = .29, p < .05$). Perceived attractiveness of the source, perceived expertise, and source identification were directly related to A_{ad} . The effects were $.21 (p < .05)$, $.17 (p < .05)$, and $.31 (p < .05)$ respectively. Since there was a direct effect of $r = .31$ from source identification to A_{ad} , the perceived similarity dimension had an indirect relationship with A_{ad} ($\beta = .06, p < .05$) and the attractiveness dimension had an indirect relationship of $\beta = .09$ with A_{ad} ($p < .05$). Furthermore, both source identification and A_{ad} were positively, directly associated with message acceptance ($\beta = .30, p < .05$; $\beta = .55, p < .05$). The path model for the Black sample showed exactly the same patterns with slightly different path coefficients. The results supported the notion that evaluation of source similarity and credibility was indirectly associated with people's acceptance of a message, through source identification and A_{ad} formation.

4. Discussion

The findings have important implications for advertising theory. They provide insights into the nature of the underlying psychological processing of source characteristics and suggest a dual processing model of attitude change resulting from the use of spokespersons in advertisements. This indicates that models of advertising should consider testing identification as one of the mediating variables (e.g., Appiah, 2001; Whittler, 1991). Previously, researchers have also tested the role of each of the mediating variables in various situations (e.g., Basil, 1996; Brown & Stayman 1992; Goldsmith, Laffety & Newell, 1999), but few studies have examined the mediating role of both variables. This analysis extended previous research and showed the three dimensions of source attributes take two routes to persuade participants, through source identification and A_{ad} formation. This dual-route processing model, however, may only be limited to source effects in advertising that involves both a source and an advertisement.

The paper also specifies the cognitive and affective components that determine source identification or A_{ad} . It is known from the model that the participants identify with a source based on perceived similarity and attractiveness evaluation. This provides an interesting finding because identification with a person is usually based on peripheral characteristics. A_{ad} formation is based on other factors such as expertise, attractiveness, and source identification.

Path analysis estimated the strength of the indirect relationships between the perceived attributes and participants' acceptance of a message. The use of path analysis offers an advantage over simple correlational analysis or multiple regression, which only offer a direct correlation between the independent variables and the dependent variable. Path analysis allows researchers to estimate both the direct and indirect relationships between the perceived attributes of a source and message acceptance (i.e., the dependent variable). The coefficients for the total effects, however, can be interpreted the way we interpret regression coefficients. For example, if two participants differ by 1 in their evaluation of the attractiveness of a source, their final acceptance of a message will probably differ by $1 \times .25 = .25$, all other factors being equal. The results indicate that when respondents evaluate a source more favorably on the attractiveness,

expertise, or perceived similarity dimensions, they are more likely to be persuaded by the message. Results from this analysis showed that the use of attractive, expert, and more ethnically similar spokespersons is more likely to enhance persuasion effects. Trustworthiness, however, was not related to source identification or A_{ad} . Because source identification is often based on perceived physical characteristics and can be formed quickly, it is possible that perceived similarity and attractiveness are more important and readily available in forming source identification. Furthermore, A_{ad} , by definition, is an affective response to an ad, which is often formed quickly and based on peripheral cues (e.g., attractiveness or expertise; MacKenzie & Lutz, 1989). On the other hand, trustworthiness, a trait that would require participants to think more deeply, may not be readily available for participants when forming source identification or affective reaction to an ad (i.e., A_{ad}). Similarly, Bhatt and Patel (2013) did not find that trustworthiness was related to A_{ad} .

Regarding practical implications, scholars discussed the importance of using ethnic spokespersons because ethnic consumers prefer alternative media or content that presents them (Ramasubramanian, 2016). Ethnic consumers often are conscious of their group and ethnic identity. If spokespersons of their own ethnicity are presented by advertisers or in the media, ethnic consumers will identify with them better and believe that such media content is for them. The present analysis showed that similarity, attractiveness, and perceived expertise of the source can enhance source identification and A_{ad} , which may lead to message acceptance. The present analysis focused on persuasive messages and their effects only. It is possible that ethnic consumers also prefer other media initiatives that can be used to foster their racial identity (Ramasubramanian, 2016), which remains a venue for future theorizing.

The study has several limitations. The use of a student sample prevents the study from being generalized to a larger population. However, some scholars argue that the use of such samples is acceptable for understanding processes that underlie attitudes and behavior, although the magnitude of effects may be different from those among other consumers (Babbie, 2001; Sear, 1986). It should be further acknowledged that students are an important population for safer-sex education programs. These messages are relevant to them. Second, forced exposure and attention of a PSA on the participants rather than distributed exposures in a field setting can make certain characteristics in an ad highly noticeable. This approach may increase the chance of finding significant results. On the other hand, participants' acceptance of a message or behavioral change may not manifest until a later time or after repeated exposures. In addition, the study used HIV communication as the context. Message acceptance may be influenced by a number of other factors, for example, previous experience, previous media exposure, or peer communication.

In conclusion, this paper has added support to Kelman's identification theory, which has rarely been tested in empirical studies. This study also offered a dual-route processing model on how ethnic consumers process source characteristics, that is, positive evaluations of the spokesperson do not have a direct relationship with message acceptance, but had their influence mediated through source identification and attitude toward the ad. In addition to the theoretical contribution, the paper has managerial implications: Better identified and more attractive spokesperson will contribute to persuasion attempts.

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