

Effect of the Characteristics of Models of Public Service Advertisements on Public Service Behavior Intension: Mediated Effect on Attitude of PSA

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Abstract

The present paper attempts to identify the role of models for public service advertising. In other words, the impact of the characteristics of advertising models on the effect of public service advertising. A cause-and-effect model between the relationship of credibility, attractiveness, and value-relevance of models on one hand and the advertising effect on the other hand was tested for its validity. The mediated effect of the characteristics of models was measured through covariance structural analysis. It was found (i) that their credibility and value-relevance had a significant effect on public service advertising attitude, (ii) that credibility and attractiveness also had a significant influence on public service behavior, (iii) that credibility exerted a partial mediated effect on public service behavior intention, and (iv) that value-relevance had a complete mediated effect on public service behavior intention. Meanwhile, attractiveness was found not affecting public service behavior. Such results are expected to prove helpful in answering the question of what aspect of models should be emphasized in designing public service advertisements.

Keywords: Attractiveness, Credibility, Public Service Advertising, Public Service Intension, Value-Relevance

1. Purpose of Research

Public service advertising seeks to enhance public benefits and attract social interest in public issues. Unlike commercial advertisements, it attempts to bring about changes in users' behavior rather than economic profits¹. A public advertising campaign, unlike commercial ones promoting products, is essentially not-for-profit and is expected to promote public good. Thus, it needs to win the sympathy from the public. Such themes as blood donation, antismoking, traffic safety, environment protection and nature conservation have been at the center of attention and researches have reported that such campaigns can bring a considerable effect². Classification of public service advertising varies from scholars. J. Park³, for example, classified advertising into

two categories: commercial and noncommercial. He called the latter 'opinion advertising'.

His concept of opinion advertising involves political advertising, public service advertising, governmental and NGO advertising. Thus, to J. Park³, public service advertising is one of the subcategories of noncommercial advertising.

Chinese scholar B. Wei⁴, on the other hand, classified public service advertising into public advertising and opinion advertising. The former refers to the advertisements on social issues executed by public and civil organizations, whereas the latter to the descriptions of various social phenomena by companies. That is, according to him, opinion advertising is a kind of cooperate image advertisements delivering the values and spirit of companies. Still, there seems to be an agreement that public service

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advertising deals with social issues and aims at public good, though the definition or the concept may vary. In sum, the crucial difference between commercial and non-commercial advertising lies in the presence and absence of a goal of commercial profit. Whether commercial or noncommercial, measurement of advertising effect has recently been at the center of attention. Advertising effect can tell us how well the message is delivered to advertising audiences and whether it has resulted in changes in their attitude and behavior. Dhalla⁵ emphasized the importance of the measurement model for advertising effect. He argued that the model should be scientifically designed and the uncontrollable factors should be statistically treated.

His proposal has stimulated many researches on the topic of measurement of advertising effect. The researches can fall into two categories: marketing effect and communication effect. The former measures visible performance of sales and the latter measures invisible result of communication.

These researches have mainly focused on the effect of commercial advertising from the perspectives of marketing and communication, since it is expected to produce economic profit. It is rather understandable that little attention has been paid to the importance of the effect of public service advertising, as it does not promote any particular product or service. As mentioned above, public service advertising is intended to solve social problems and promote positive change in society by using the form of advertisements, whereas commercial advertising is expected to bring profit to an individual or a firm. Even corporate image advertisements are designed to eventually promote the interest of the advertiser, not the public, though the message may appear to promote public good. Thus, the theme of public service advertisements must target the interest of the whole nation and deal with public issues. Moreover, the messages need to be in neutral and objective tones.

Previous researches on the effect of public service advertising have focused on the messages and the recipients, but some technical shortcomings of their measurement models need to be addressed. Therefore, in order to accurately measure the effect of public service advertising, the present research focuses on the characteristics of models, which have been valued in the analysis of effect of commercial advertisements but neglected for noncommercial ones.

The goals of the present research are as follows. First, it aims to identify what characteristics of models exert influence on advertising effect. Under the test was the tentative conclusion based on the literature review of previous researches that the relevant features of models are credibility and attractiveness.

Second, we might ask what other sub-characteristics of models than credibility and attractiveness have an impact on the effect of public service advertisements. Considering the assumption that suitability and conformity of models with product images exerts influence on advertising effect, it was tested if value-relevance had an influence on the effect of public service advertising. Third, relative importance of these three factors was under investigation. In commercial advertising, physical attractiveness of models and similarity with users are known to have greater influence than any others. The hypothesis was tested that value-relevance might have greater impact on public service advertising effect. The findings are expected to shed light on producers' direction of designing public service advertisements.

Fourth, the current research intended to see whether public service advertising attitude had an influence on advertising effect. This particular question has been neglected in the measurement model for commercial advertisements. However, it must be a meaningful question to ask in any analysis of public service advertising, simply because it essentially targets public good and the messages are expected to result in changes in attitudes. The findings will help better prepare and take this factor into consideration in designing public service advertisements in the future.

2. Research Model and Hypotheses

An advertising model is expected to project his asset of reputation, favorability and popularity additionally to the image of products, enhancing communication effect. The model's characteristics of preference, attractiveness, similarity, expertise, and sincerity can appeal to consumers to attain intended advertising effect. Especially in modern times, the model may act as an information source and represent a particular brand or firm with his role and persuasiveness. Thus, there is an agreement that models account for a great portion of advertising effect. In manufacturing advertisements, selection of an advertising model is a very important strategic decision to make.

The characteristics of models comprise source credibility and source attractiveness. The former refers to expertise and trustworthiness of models, whereas the latter consists of source familiarity, likability and similarity. The messages of the source can let consumers go through internationalization and identification before showing attitude change^{6,7}. In general, the features of a celebrity model contain reliability and attractiveness⁸⁻¹¹. The great influence of these models on consumers has led researchers investigate the features of celebrity models. It has been suggested that the two traits of reliability and attractiveness are crucial in causing changes in consumers' attitude^{6,9,12-18}. However, many scholars have criticized that this approach to advertising effect with model characteristics only cannot account for the dynamics of advertisements and have proposed alternative frameworks integrating a variety of factors related with the characteristics. Desarbo and Harshman¹⁹, for example, claimed that image suitability or conformity between a product and a model can determine advertising effect and this approach called 'harmony hypothesis' has been investigated by many researchers: Kahle and Homer¹²; Kamins¹³; Kamins and Gupta¹⁴; Lynch and Schuler¹⁵; Misra and Beatty¹⁶; Till and Busler^{17,18}. Kahle and Homer¹² and Kamins¹³, in their test of the harmony hypothesis, found that advertising effect was greater with attractive celebrity models than with unattractive ones if the product advertised has connection with attractiveness. Till and Busler¹⁸, in turn, found that agreement between characteristics of products and reliability or expertise of the model can also enhance advertising effect as well. S. You²⁰ applied the harmony hypothesis to advertisement background and found that agreement between the image of models and the background of advertisements had a positive influence on advertising effect. As mentioned above, the present research, based on the findings in the area of commercial advertising, is designed to apply those influential features of models to public service advertising. It might be assumed and expected that the attractiveness and credibility of models can also have a positive effect in public service advertising as well. One thing to note is that the unique properties of public service advertising should be taken into consideration in applying the cause-effect relationship used for commercial ones. That is, it should be considered that public service advertising is intended to solve social problems, bring about establishment of values and/or behavioral changes. Therefore, it is not difficult to predict that value-relevance between

the image of models and the pursuing value of advertisements will be a strong influential factor. The following hypotheses were established for examination. See Figure 1 for the research model.

Hypothesis 1: The credibility of public service models will have a positive influence on public service advertising attitude.

Hypothesis 2: The attractiveness of public service models will have a positive influence on public service advertising attitude.

Hypothesis 3: The value-relevance of public service models will have a positive influence on public service advertising attitude.

Hypothesis 4: The credibility of public service models will have a positive influence on public service behavior intention.

Hypothesis 5: The attractiveness of public service models will have a positive influence on public service behavior intention.

Hypothesis 6: The credibility of public service models will have a positive influence on public service behavior intention.

Hypothesis 7: The credibility of public service models will have a positive influence on public service behavior intention with the mediation of public service advertising attitude.

Hypothesis 8: The attractiveness of public service models will have a positive influence on public service behavior intention with the mediation of public service advertising attitude.

Hypothesis 9: The value-relevance of public service models will have a positive influence on public service behavior intention with the mediation of public service advertising attitude.

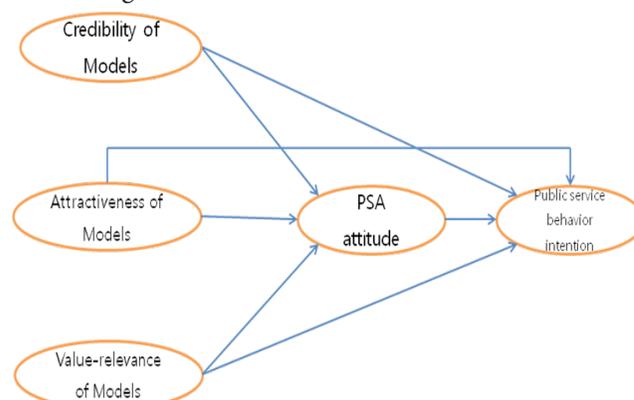


Figure 1. Research model.

3. Methods

3.1 Research Subjects

The present research aims to identify the relationship between advertising models' characteristics and public service behavior intention. To that purpose, a couple of public service advertisements were exposed to a group of 392 college students attending N university located in Cheonan and M university in Daejeon. The printed advertising materials in which actresses Chaeyong Han and Hara Kuh modeled were exposed to the group of students for a couple of one and a half-minutes followed by answering survey questions. The survey was conducted for two weeks from October 13 to 24, 2014.

3.2 Measurement Tools

3.2.1 Characteristics of Models: Independent Variable

3.2.1.1 Credibility

The credibility of a model comprises concepts of his or her expertness and trustworthiness: it is measured on the basis of how much the model expresses qualified expertness on the products and trustworthiness in delivering the messages²¹. It might be said that the reliability of the models in commercial advertisements can be paraphrased as the credibility of those in public service advertising in the current paper. To measure this feature, the subjects' were asked to choose their answers on a Likert five-point scale (1 = strongly disagree, 5 = strongly agree). The given statements were as follows: (i) the model is honest, (ii) the model is trustworthy, (iii) the model is sincere, and (iv) the model is straightforward. The reliability of the scale was obtained at $\alpha = .909$, which can be interpreted good enough.

3.2.1.2 Attractiveness

The attractiveness of a model tells us how much the users feel friendly and similar to themselves and it comprises the concepts of familiarity, likability and similarity²². This category was also measured with a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The measurement items were as follows: (i) the model looks nice, (ii) the model looks friendly, (iii) the model looks intimate, (iv) I feel fond of the model, and (vi) the model is attractive. The Cronbach α was obtained at .833, which is also good enough.

3.2.1.3 Value-Relevance

The value-relevance feature measures how much the image of the model accords with the pursuing value of the advertisements. It was also measured with a Likert five-point scale (1 = strongly disagree, 5 = strongly agree). The measurement items were as follows: (i) the image of the model goes well with blood donation, (ii) the model is suitable for advertising blood donation, (iii) the model well expresses the value of the public service advertisement, (iv) the model is suitable for advertising blood donation, and (iv) the model has a positive influence on advertising effect of blood donation. The reliability of the scale was good enough: Cronbach $\alpha = .938$.

3.2.2 Mediated Variable

3.2.2.1 Attitude of Public Service Advertising

The attitude adopted a slightly revised version of H. Key and S. You's²³ scale. Seven measurement items were measured on a Likert five-point scale (1 = strongly disagree, 5 = strongly agree). The items were (i) this public service advertisement is appealing, (ii) this advertisement is trustworthy, (iii) this advertisement provides useful information, (iv) the message is clear, (v) this advertisement attracts my attention, (vi) this advertisement is persuasive, and (vii) this advertisement is good overall. The Cronbach α was found at .885, which is good enough.

3.2.3 Dependent Variable

3.2.3.1 Public Service Behavior Intention

Consumers' behavior intention toward public service advertising (for blood donation) were measured with two questions of a Likert five-point scale (1 = strongly disagree, 5 = strongly agree). The two measurement items were (i) I will donate blood in the future, and (ii) I will persuade my acquaintances to donate blood. The Cronbach α was obtained at .914, which is good enough.

3.3 Data Analysis

The data collected from the survey was analyzed with the program of SPSS/PC+ Windows 18.0. An exploratory factor analysis was conducted to test the validity of the scales of attractiveness, credibility, measure-relevance, attitude and behavior intention. To that purpose, VARIMAX rotation method was employed and an inter-item reliability (Cronbach α) was analyzed for each scale. Also, the Amos 18.0 program for covariance structure analysis was used to analyze the relationship among variables.

Table 1. Results of analysis of reliability of measurement tools

Measurement tools		Cronbach α
Model Characteristics	Credibility	.909
	Attractiveness	.883
	Value-relevance	.938
Attitude of Public Service Advertising		.885
Public Service Behavior Intention		.718

Table 2. Results model A vs. the revised model

Models	χ^2	df	<i>p</i>	RMR	RMSEA	GFI	AGFI	NFI	CFI	TLI
Research Model A	876.915	220	.000	.070	.088	.839	.798	.880	.907	.893
Finalized Model	245.066	123	.000	.038	.050	.940	.916	.953	.976	.970
Acceptance Level			more than 0.5	at least 0.5	Below 0.8	more than 0.9				

4. Results

Some of the goodness-of-fit indexes, GFI = .839, AGFI = .798, NFI = .880, TLI = .893, were found not meeting acceptance criteria. Thus, those items whose modification indices (MI) were great and thus identified as observation variables were deleted to improve the goodness-of-fit: Items 3 and 5 (value-relevance), Item 10(credibility), Items 12 and 13 (attractiveness), and Item 7(advertising attitude). As a result, all the goodness-of-fit indexes of the revised research model were found meeting acceptance criteria. Figure 2 illustrates the finalized research model to test the hypotheses under investigation. The results of tests of the hypotheses under discussion are well summarized in Table 2 and Figure 3. First, Hypothesis 1 was intended to identify the influence of the credibility of models on advertisement attitude. The standardized path coefficient between the two factors was obtained at .156 ($t = 2.575, p < .01$), which indicates a positive influence, supporting Hypothesis 1. Hypothesis 2 stated that the attractiveness of models will have a positive influence on the attitude toward public service advertising. The standardized path coefficient between the two factors was obtained at .046

($t = 1.091, p > .05$), which indicates that there is no significant relationship between the two. Thus, Hypothesis 2 was rejected. Hypothesis 3 was about the effect of the value-relevance of models on the advertising attitude. The standardized path coefficient between the two factors was obtained at .232 ($t = 5.450, p < .001$), which indicates a positive influence, supporting Hypothesis 3. Hypothesis 4 stated that the credibility of models will have a positive influence on public service behavior intention. The standardized path coefficient between the two factors was obtained at .295 ($t = 3.055, p < .01$), which

indicates a positive influence, supporting Hypothesis 4. Turning to Hypothesis 5, the attractiveness of models was expected to have a positive influence on public service behavior intention. The standardized path coefficient between the two factors was obtained at -.143 ($t = -2.239, p < .05$), which indicates a negative influence, rejecting Hypothesis 5. The value-relevance was expected to influence public service behavior intention. The standardized path coefficient between the two factors was obtained at -.021 ($t = -.338, p > .05$).156($t = 2.575, p < .01$), which indicates no significant influence. Thus Hypothesis 6 was rejected.

Hypotheses 7 to 9 were established to identify the effect of the model characteristics – credibility, attractiveness and value-relevance – on public service behavior intention with the advertising attitude being a mediator. To test such a mediated effect, the present model appealed to the statistic significance of the path coefficients.

Hypothesis 7 was intended to identify whether the effect of the credibility of models on public service behavior intention will be mediated by the advertising attitude. The criterion of statistical significance was used to determine the mediated effect. The standardized coefficient of the direct path between the credibility of models and public

service behavior intention was found at .295 ($t = 3.055$, $p < .01$) was found significant, and that to the advertising attitude was found at .156 ($t = 2.575$, $p < .01$), which turned out to be also significant. And, the standardized coefficient of the direct path between the advertising attitude and public service behavior intention was obtained at .418 ($t = 3.912$, $p < .001$), which was also considered significant. Thus, Hypothesis 7 was adopted with a partial mediated effect.

Hypothesis 8, in turn, was intended to identify whether the effect of attractiveness of models on public service behavior intention will be mediated by the advertising attitude. The same criterion of statistical significant found the following results. The standardized coefficient of the direct path between the attractiveness of models and public service behavior intention was significant at -.143 ($t = -2.239$, $p < .05$), and that to the advertising attitude was found at .046 ($t = 1.091$, $p > .05$), indicating no significant influence.

Table 3. Results of hypothesis tests

Path		Estimate	S.E.	C.R.	P	Result
PSAA	<--- credibility	.156	.061	2.575	.010	accepted
PSAA	<--- attractiveness	.046	.042	1.091	.275	rejected
PSAA	<--- Value-relevance	.232	.043	5.450	***	accepted
PSBI	<--- credibility	.295	.097	3.055	.002	accepted
PSBI	<--- attractiveness	-.143	.064	-2.239	.025	rejected
PSBI	<--- Value-relevance	-.021	.062	-.338	.735	rejected
PSBI	<--- PSAA	.418	.107	3.912	***	accepted
credibility ---> PSAA ---> PSBI		.065 (partial mediation)				accepted
attractiveness ---> PSAA ---> PSBI		.019				rejected
Value-relevance ---> PSAA ---> PSBI		.097 (complete mediation)				accepted

PSAA: public service advertising attitude.

PSBI: public service behavior intention.

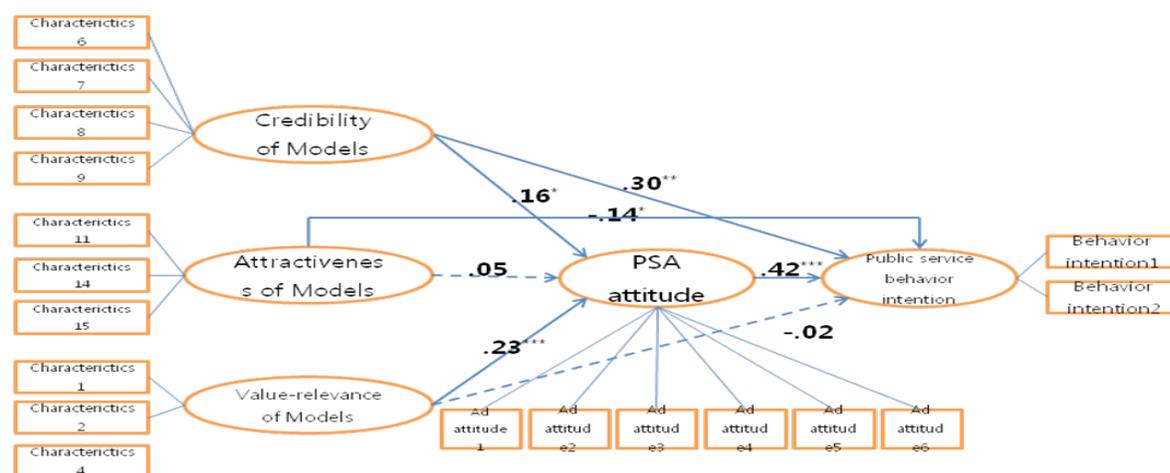
5. Concluding Remarks

The present research started with the idea that little attention has been given to the effect of models on public service advertisement in contrast to commercial ones. That is, a great portion of studies on public service advertising has focused the effect of various framing or message appealing methods for a particular theme or the changing advertising effect from different target users.

Also, the coefficient of the direct path between the advertising attitude and public service behavior intention was obtained .418 ($t = 3.912$, $p < .001$), which indicates a significant influence. Thus, Hypothesis was rejected with no significant mediated effect.

The same line of thought was applied to Hypothesis 9, which stated that the effect of the value-relevance of models on public service behavior intention will be mediated by the advertising attitude. The direct path coefficient between the value-relevance and public service behavior intention was found not significant at -.021 ($t = -.338$, $p > .05$), and the path to the advertising attitude was obtained at .232 ($t = 5.450$, $p < .001$), which indicates a significant influence. Also, the standardized coefficient of the direct path from the advertising attitude to public service behavior intention was .418 ($t = 3.912$, $p < .001$), indicating a significant influence. Thus, a complete mediated effect was found, supporting Hypothesis 9.

The central purpose of the current research is to apply and extend the characteristics of models widely recognized in commercial advertising to public service advertising. From the findings in the researches on the effect of commercial advertising models, the characteristic of attractiveness was adopted, and reliability and suitability were slightly modified as credibility and value-relevance for the current research model. In sum, attractiveness, credibility and value-relevance were taken as main



“Solid lines(–)” show accepted hypothesis. Dotted lines (---)” show rejected hypothesis.

Figure 2. Finalized model.

characteristics of models and public service behavior intention was established as a variable for attitude change. A cause-and-effect research model was designed to test the relationship among these variables. The findings from the test are as follows. It was found that credibility and value-relevance had a significant influence on the attitude toward public service advertising, thus supporting Hypothesis 1 and 3. However, the attractiveness of models was not influential for the attitude. Thus, Hypothesis 2 was rejected. Second, as far as the effect of model characteristics on public service behavior intention is concerned, credibility was found having a positive influence and attractiveness a negative influence, which perhaps indicates that enhancing the attractiveness of models would not guarantee enhanced advertising effect in the case of public service advertisements. Thus, Hypothesis 5 was rejected. On the other hand, the value-relevance of models was found not exerting direct influence on public service behavior intention, which rejects Hypothesis 6. Third, the effect of the credibility of models on public service behavior intention was partially mediated by the advertising attitude, supporting Hypothesis 7. The value-relevance, in turn, was completely mediated, supporting Hypothesis 8. Hypothesis 9, on the other hand, was rejected, since no mediated effect was found between the attractiveness of models and public service behavior attention. These findings might shed some light on manufacturing advertisements. First, in designing public service advertisements, selection of a suitable model should be crucial: he or she must possess an image of expertise and

reliability, since these features have a significant influence on the advertising attitude and behavior intention. Also, the close relationship between the value-relevance of models and public service behavior intention leads us to believe that the image of models must accord with the pursuing value of the advertisements for an optimal advertising effect. It has been well-known that the effect of commercial advertisements is positively affected by the attractiveness of models. Interestingly enough, public service advertisements were also influenced by the same feature, but negatively. That is, the attractiveness of models does not lead to a greater effect in the case of public service advertising. Rather, the agreement of the image of models and the pursuing value of the advertisements was found playing a much greater impact on the advertising effect. So far, most of the models for such public campaigns as blood donation and antismoking have been celebrity entertainers. It is now time to ask whether they are really optimal choices. If we follow the findings of the current research, it might not be a desirable strategy to just focus on their attractiveness. When selecting a goodwill ambassador, it seems to be more desirable to consider the suitability and similarity of his or her image more importantly than the popularity or attractiveness. Future researches might call for a more detailed classification of the model characteristics in order to obtain better understanding of the effect of public service advertising. Also, it should be interesting to see whether varying model effect depends on different themes of advertisements

6. References

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