



AIDS Communication Campaigns in Uganda: Organizational Factors and Campaign Planning as Predictors of Successful Campaign Execution

James Kiwanuka-Tondo , Mark Hamilton & Jessica Katz Jameson

To cite this article: James Kiwanuka-Tondo , Mark Hamilton & Jessica Katz Jameson (2009) AIDS Communication Campaigns in Uganda: Organizational Factors and Campaign Planning as Predictors of Successful Campaign Execution, International Journal of Strategic Communication, 3:3, 165-182, DOI: [10.1080/15531180902984190](https://doi.org/10.1080/15531180902984190)

To link to this article: <http://dx.doi.org/10.1080/15531180902984190>



Published online: 01 Jul 2009.



Submit your article to this journal [↗](#)



Article views: 233



View related articles [↗](#)



Citing articles: 3 View citing articles [↗](#)

ARTICLES

AIDS Communication Campaigns in Uganda: Organizational Factors and Campaign Planning as Predictors of Successful Campaign Execution

James Kiwanuka-Tondo

North Carolina State University, Raleigh, North Carolina, USA

Mark Hamilton

University of Connecticut, Storrs, Connecticut, USA

Jessica Katz Jameson

North Carolina State University, Raleigh, North Carolina, USA

About 60% of all the HIV/AIDS cases are found in sub-Saharan Africa (UNAIDS, 2007). While a few countries in the region have shown a decline in prevalence, most countries in southern Africa have made little progress in their fight against AIDS. The goal of this study was to provide empirical support to confirm and extend an earlier model of the effect of organizational factors and campaign planning on campaign execution to help answer the question of what makes for a successful communication campaign to change AIDS-related behavior. A survey of the top leaders of 120 Ugandan organizations delivering AIDS communication campaigns supports a model that illustrates the vital role of several features, such as focused campaign goals, the formality of organizational structure, and outreach worker supervision, on effective campaign execution. Surprisingly, financial resources are negatively related to goal extensiveness and message clarity and may be a distraction during campaign execution.

About 60% of all the HIV/AIDS cases worldwide are found in sub-Saharan Africa (UNAIDS, 2007) even though only one out of every 10 people in the world lives in Africa. A few countries in the region such as Kenya, Uganda, and Zimbabwe are showing a decline in HIV/AIDS prevalence. Most

The research was conducted with a grant from John M. Lloyd Foundation.

Correspondence should be sent to James Kiwanuka-Tondo, Department of Communication, North Carolina State University, CB 8104, Raleigh, NC 27695-8104, USA. E-mail: jktondo@social.chass.ncsu.edu

notably, prevalence among adults in Uganda declined sharply from as high as 30% in some urban areas in 1992 (Uganda AIDS Commission, 2000) to about 6.7% country wide in 2005 (Ministry of Health and ORC Macro, 2006). Yet, most countries in southern Africa have made little progress in their fight against AIDS. Compare the success in Uganda to the disaster in Lesotho, where about 23.2% of the adult population was living with HIV in 2005 (UNAIDS, 2007). A similar tragedy is unfolding in South Africa, where 5.5 million people were living with HIV in 2005—the highest number in the world (UNAIDS, 2007). What accounts for the stark difference in the trend between countries such as Uganda and Lesotho? The survival of millions of people turns on answering the question of what makes for a successful communication campaign to change AIDS-related behavior.

Research has identified a number of variables that correlate with the success of communications campaigns. Many of these variables are aspects of campaign planning such as conducting audience research, analyzing channel availability, targeting appropriate audiences, selecting messages that are relevant to particular audience segments (Backer, Rogers, & Sopory, 1992; Backer & Rogers, 1994; Hornik, 1988, 1989; Kiwanuka-Tondo & Snyder, 2002; Woods, Davis, & Westover, 1991), and goal specificity (Holtgrave et al., 1995; Hornik, 1988; Kiwanuka-Tondo & Snyder, 2002; Manoff, 1985). Other determinants of campaign success have been more closely related with message processing, such as reach (Hornik, 1988, 1989; Shimp, 1993; Snyder & Hamilton, 2002), message quality (Manoff, 1985; Shimp, 1993), and execution quality (Hornik, 1988; Manoff, 1985).

More recently, Curtin and Gaither (2007) have taken a postmodern perspective on public relations theory, emphasizing the role of identity, difference, and power. These authors illustrate that identity is socially constructed, dynamic, and political and this must be considered in campaign planning and execution. This work provides an important context for international public relations practice.

While Curtin and Gaither's work (2007) and earlier work by Rogers (2003) have provided many valuable insights into the relationship between communication campaigns, target audiences, and the adoption of new practices, little research has been conducted on the organizational factors that influence the campaign design variables mentioned above (Backer, Rogers, & Sopory, 1992; Backer & Rogers, 1994; Kiwanuka-Tondo & Snyder, 2002) and hence the dire need for more research in the area. The first ever systematic and quantitative study to attempt this endeavor, by Kiwanuka-Tondo and Snyder (2002), established a theoretical model that mainly focused on the organizational and campaign variables that affect campaign quality (See Figure 1).

In their model, the authors measured campaign quality using goal specificity, execution quality, and message quality. The purpose of the present research is to confirm and expand this theoretical model by measuring audience reach, defined as the percentage of the audience exposed to the AIDS campaigns. By doing so the present research establishes new relationships between organizational factors, campaign planning, and campaign execution and contributes to both theory and the practice of strategic health communication campaigns.

ORGANIZATIONAL FACTORS AS PREDICTORS OF CAMPAIGN SUCCESS

Many African nations, including Uganda, have adopted a "multisectoral approach" to AIDS communication that involves an alliance among the private sector, communities, cultural groups, religious institutions, nongovernmental organizations (NGOs) and government agencies such as the National AIDS Control Program (NACP) in Uganda (Uganda AIDS Commission, 2000; Uganda AIDS Commission, 2002). As noted by other health campaign scholars (Stephens, Rimal, & Flora,

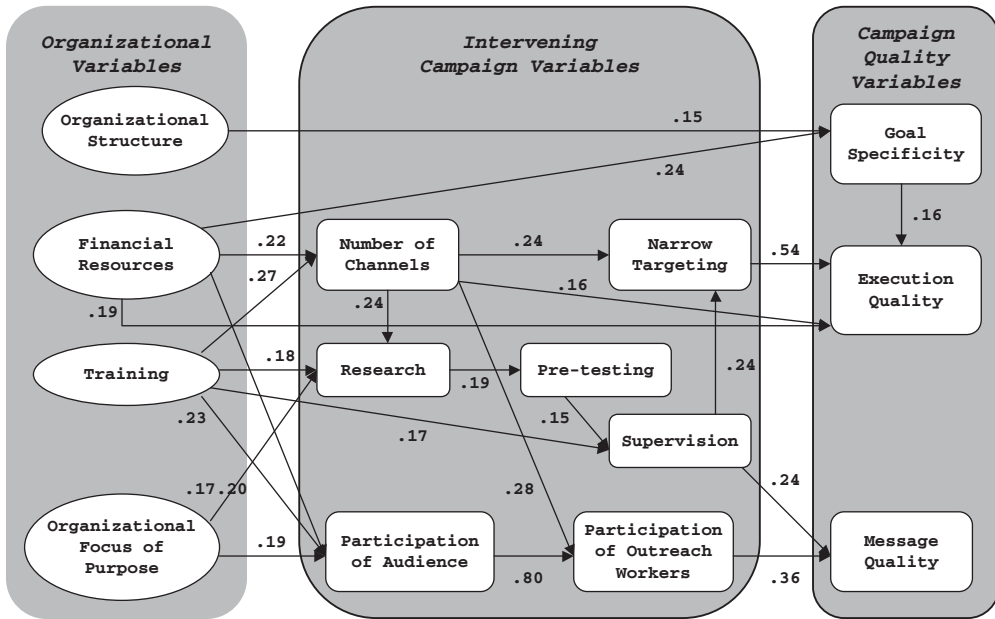


FIGURE 1 Model of relationships between organizational and campaign variables from study by Kiwanuka-Tondo & Snyder (2002). *Note.* Root-mean squared error = .0592. Chi-square (62, $N = 47$) = 4.54, $p = 1.00$.

2004), community organizations serve a critical role as the source of health prevention communication, and this is clearly the case regarding AIDS campaigns in Uganda.

These organizations design campaign messages and determine how that design will be executed, often with the help of outreach workers. If the success of a campaign hinges on key aspects of planning and execution, then a crucial research objective is to identify which qualities of an organization influence their choice of design. Yet, little is known about the organizational factors that affect campaign design (Backer, Rogers, & Sopory, 1992; Backer & Rogers, 1994; Kiwanuka-Tondo & Snyder, 2002). A few studies have examined which organizations have been more successful in executing particular types of campaigns, and which campaign elements have led to success. The results from these studies suggest a two-step model, as shown in Figure 2. In the first step, organizational factors influence campaign planning variables. In the second step shown in Figure 2, campaign planning variables influence campaign execution. In general, greater planning should improve the execution of the campaign.

The present study further explored the two-step process model by examining the components within each of the three factors shown in Figure 2 (See Figure 3). Those aspects of organizations that might influence campaign planning include the function, structure, and resources of the organization. In turn, those aspects of campaign planning that might influence campaign execution include information management, identification of audience segments, and the differentiation of audiences. The campaign planning variables influence campaign execution, which includes audience exposure, attention, and comprehension. The next sections consider each of the relationships among the components of Figure 3 in reverse causal order, starting with campaign execution, continuing with campaign planning, and ending with organizational factors.

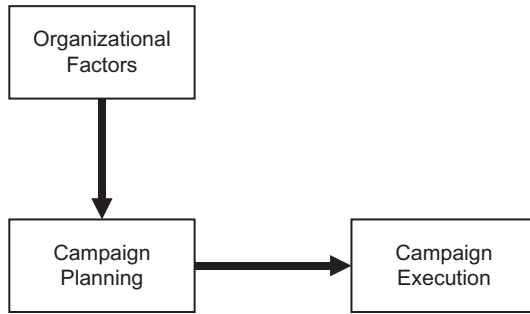


FIGURE 2 Two-Step Model of relationships between the organizational and communication campaign design variables.

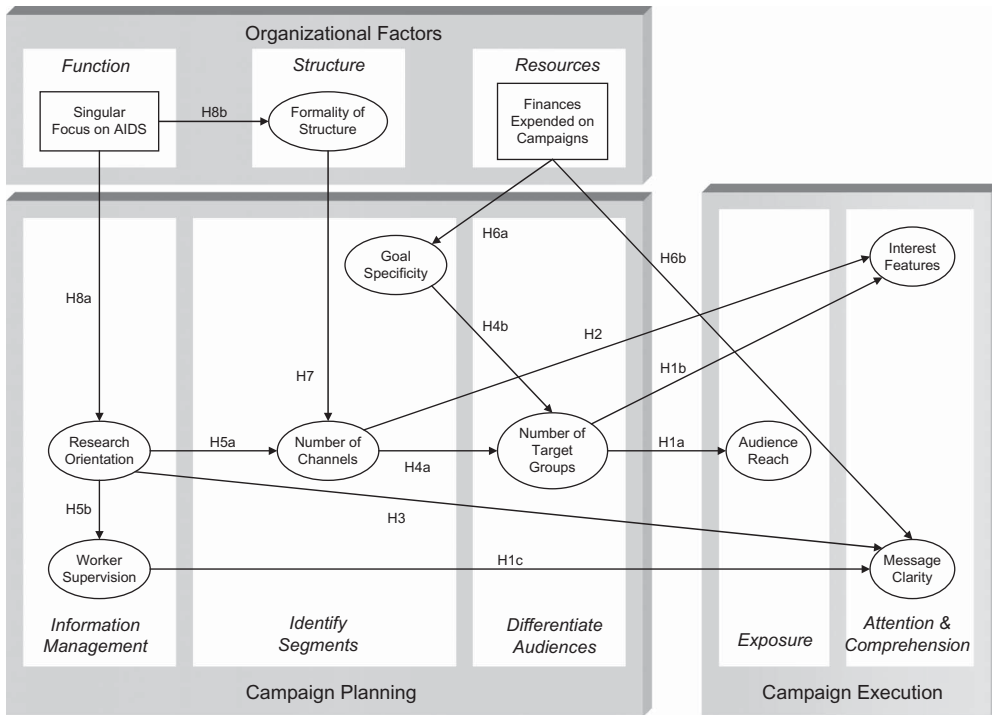


FIGURE 3 Model of the hypothesized effect of organizational and communication campaign design variables on message reception.

CAMPAIGN EXECUTION

Effective campaign execution relies on maximizing the audience’s reception of the message. The three stages of the message reception process include exposure, attention, and comprehension

(Hamilton, Hunter, & Boster, 1993; McGuire, 1985, 1989). The concept of *audience reach* addresses the need to expose the message to as many members of the target audience as possible. In order to capture the audience's attention, message designers use *interest features*, such as color, music, children's voices and slogans (Mendelsohn, 1973; Newhagen & Reeves, 1992). Effective execution also requires that audience members understand the message, which requires increasing the *clarity* of the message (Kiwanuka-Tondo & Snyder, 2002).

Individuals differ considerably in their response to campaign messages, so researchers often divide their audience into distinct target groups. By targeting groups who differ on important demographic and psychographic variables, an organization should be able to extend the reach of the campaign and design messages with relevant attention-getting interest features. Hence, we propose that number of target groups, reflecting the degree of audience differentiation, will increase message reception. This general proposition implies two specific hypotheses:

H1a: A greater number of target groups increases the reach of the campaign.

H1b: A greater number of target groups increases the number of interest features in the campaign message.

The third aspect of message reception, clarity, may be improved by worker supervision. We propose that supervision of outreach workers provides greater opportunities for feedback to message designers which allows for increased clarity through message adjustments (Kiwanuka-Tondo & Snyder, 2002). Outreach workers have direct contact with the audience and are therefore able to uncover difficulties due to cultural barriers, misunderstandings, and poor persuasive strategies. The more often outreach workers are in contact with their supervisors, the more efficiently feedback can be shared.

H1c: Worker supervision is related to an increase in message clarity.

The hypotheses concerned with the two target group effects are shown on the far right side of Figure 3.

The Effect of Segment Identification on Interest Features

Different media require different techniques for capturing audience attention, such as sounds (radio), color (print) or visual images (television). Figure 3 illustrates that the number of channels used increases the number of interest features present in the message (Kiwanuka-Tondo & Snyder, 2002). Hence, the more diverse the approach to channels, the more likely the campaign messages will contain media-specific features.

H2: A greater number of channels used increases the number of interest features in the message.

The Effect of Conducting Research on Message Clarity

Research prior to the campaign can establish the presence of resistance points such as cultural beliefs, misconceptions, inhibiting attitudes, and preferred behaviors that need to be addressed in campaign messages (Atkin & Freimuth, 1989; Backer, Rogers, & Sopory, 1992; Curtin & Gaither, 2007; Holtgrave et al. 1995; Hornik, 1988; Manoff, 1985; Woods, Davis, & Westover,

1991). The model in Figure 3 proposes that the more research the organization conducts, the clearer the resulting campaign message.

H3: Prior research increases message clarity.

CAMPAIGN PLANNING

During the planning of a campaign, an organization conducts research, segments the potential audience, and differentiates the target groups. At the point of audience segmentation, organizations use demographic or psychographic information obtained from research to create clusters of audience members. Once identified, segments are profiled on additional variables as the organization seeks to further differentiate its target groups and tailor messages to those groups.

The Effect of Segment Identification on Audience Profiling

Some researchers identify their target groups via conceptual analysis. Other researchers take a more empirical approach, using statistical procedures like cluster analysis to segment their audience. Whether they are identifying segments with a conceptual or cluster analysis, researchers can employ media use variables or attributes related to knowledge, attitudes, or behavior. Generally, the model in Figure 3 proposes that the more criterion variables entered into a segmentation, the greater the opportunity for a granular response, yielding more target groups as an outcome.

Number of channels. The pioneering researchers on media effects argued that heavy users of one medium are also heavy users of other media (Berelson, Lazarsfeld, & McPhee, 1954; Lazarsfeld, Berelson, & Gaudet, 1948; Stewart & Ward, 1994). Some scholars argue that campaigns using multiple channels are more likely to reach a larger percentage of the audience (Backer, Rogers, & Sopory, 1992; Flay & Sobel, 1983; Hornik, 1988, 1989; Shimp, 1993). This suggests that organizations that use multiple media are likely to expose their campaign messages to a greater percentage of their target audience.

Suppose that media use variables are used as a basis for clustering. Including more channels in a campaign allows for greater diversity in how people might be exposed to the campaign messages. With a greater possibility for individual differences expressed on the channel variables, there should be a greater number of target groups to emerge from the segmentation analysis.

H4a: A greater number of channels used increases the number of target groups.

Goal extensiveness. Suppose that campaign goals are used as the basis for clustering. In the popular Knowledge-Attitude-Behavior (K-A-B) model, knowledge change is proposed as a precursor to attitude change, and attitude change is proposed as a precursor to behavior change. Campaigns with a narrow scope seek only to increase knowledge or awareness of the problem. More comprehensive campaigns go beyond increasing awareness to change attitudes. The broadest campaigns go beyond knowledge and attitude change to include behavior change. Thus, campaigns vary in the extent of their objectives. More extensive goals on which an audience can be segmented increases the probability that more target groups will emerge from a conceptual or cluster analysis.

Setting specific, measurable, and attainable goals is a crucial aspect of campaign design (Backer, Rogers & Sopory, 1992; Holtgrave et al., 1995; Mendelsohn, 1973). Kiwanuka-Tondo & Snyder (2002) define *goal specificity* as the degree to which the goals of the AIDS campaign include details about the types of behaviors to be changed (such as “promote condom use”), rather than general goals (such as “stop AIDS”). It is expected that when the campaign goals include behavior change, the messages would also be more likely to address behavior change. Goal specificity and goal extensiveness are related concepts in that researchers who can distinguish knowledge, attitude, and behavior change are more inclined to run more extensive campaigns.

H4b: Greater goal extensiveness is related to an increase in the number of target groups.

Conducting Research and Segment Identification

The effect of research on segment identification. Based on previous research by Kiwanuka-Tondo and Snyder (2002), the model in Figure 3 proposes that organizations that conduct research are more likely to be aware of the various media available to carry the campaign message to their audience.

H5a: More extensive research is related to an increase in the number of channels employed in the design.

The effect of research on worker supervision. When organizations conduct research they are more likely to recognize the value of ongoing evaluation and feedback. One way to achieve this is to maintain a close connection with outreach workers, or engage in closer supervision (Kiwanuka-Tondo & Snyder, 2002). This leads to hypothesis H5b:

H5b: Prior research increases the likelihood of worker supervision.

ORGANIZATIONAL FACTORS

The nature of the organization planning the communication campaign includes its function, structure, and resources. The *function* of the organization will largely depend on its goals and sense of purpose. Some organizations, such as a grassroots AIDS caregiving organization, may be narrowly focused on a particular type of communication campaign, whereas others, such as religious organizations, will have a wider focus, engaging in a broad spectrum of activities. Organizations also differ in *structure* or the degree of formality and the extent to which the flow of information is constrained. Some organizations are more hierarchical than others, where hierarchy provides an indirect indicator of information integration within the work groups. Finally, organizations vary in the *financial resources* they have available to spend on their campaigns. Some organizations will have vast financial resources and a large workforce to bring to a campaign, whereas others are leaner, with less money and fewer workers to allocate to a campaign.

Available Resources

The model in Figure 3 proposes that financial resources will have an impact on campaign planning. Presumably, greater financial expenditures on campaigns should improve the quality of campaign planning.

Financial expenditures on campaigns. Funding agencies insist on specific behavioral goals for a campaign before releasing funds (Burns & Stalker, 1972; Kiwanuka-Tondo & Snyder, 2002). It is conventional wisdom that funded organizations have more financial resources at their disposal to ensure that their campaigns set specific goals, hence the link between financial resources and specificity of campaign goals. Organizations with greater financial resources available are more likely to set more extensive objectives than organizations with fewer resources. Similarly, it is expected that organizations with greater financial resources and more specific goals will create messages with clearly stated audience outcomes.

H6a: Greater financial resources is related to greater goal specificity.

H6b: Greater financial resources is related to increased message clarity.

Organizational Structure

We are defining organizational structure as the existence of a formal structure, characterized by existence of written rules and regulations as well as a published organizational chart. More formal organizations are likely to be more differentiated than less structured, informal organizations. More formally structured organizations are thus more likely to have the expertise to run multi-media campaigns. In order to execute campaigns that span broadcast and print media, the organization needs employees who have had experience with television, radio, newspapers, magazines, posters, flyers, and the Internet.

H7: More formal organizational structure is related to an increased number of channels used in the campaign.

Organizational Function

Organizations vary in their degree of specialization. Some organizations are highly specialized in the type of campaigns they manage while others take on a wide variety of projects. Organizations with a broader focus have the potential to be distracted from the details of a particular campaign (Kiwanuka-Tondo & Snyder, 2002).

Research requires a focused purpose (Holtgrave et al., 1995; Hornik, 1988; Kiwanuka-Tondo & Snyder, 2002), defined as whether the organization was started with a specific overall goal of addressing AIDS-related activities. Organizations with many purposes are likely to spread resources thinly, perhaps omitting research activities on the false premise that they are more expendable than campaign implementation activities (Kiwanuka-Tondo & Snyder, 2002). It is expected that those with the single goal of conducting AIDS campaigns would be more likely to spend resources on research in order to better achieve their goal.

H8a: Organizations with greater focus are more likely to conduct research.

The larger and more differentiated an organization becomes, the more informal networks replace formal communication as organizational members rely on relevant subgroups within their area of specialty as opposed to formal channels in the organizational hierarchy. Ironically, these informal networks improve the flow of bottom-up information, but are also likely to undermine formal structure.

H8b: Organizations with greater focus are likely to have a less formal structure.

METHOD

In order to test the hypotheses shown in Figure 3, in-person interviews were conducted with heads of organizations running AIDS campaigns in Uganda. The interviews consisted of structured survey questions and were conducted by 10 medical doctors. These doctors were trained in interviewing skills and data management before starting the data collection. The interviews were conducted orally in English and were supervised by an in-country consultant-coordinator. All interviews were conducted with top management personnel from each organization in their offices.

Sample

At the time the interviews were conducted, in 2003, there were 300 organizations running AIDS campaigns in the country. The list of organizations was provided by the Network of AIDS Service Organizations (NASO). According to Keyton (2006), the suggested sample size for a population of 300 with a 5% sampling error is 169. Using simple random sampling with a random numbers table, an oversample of 180 organizations was selected. Of the 180 organizations contacted, 120 organizations participated in the survey. Hence, the response rate was 67%. The sample covered all 56 districts of Uganda at that time, representing the geographical areas as well as the variety of organizations in the country. Of these organizations, 79.2% (95) were private or nongovernmental, 5.8% (7) were community based, 4.2% (5) were international, and 1.7% (2) were governmental. Only 9.1% (11) of the organizations did not indicate their type.

The participating organizations were funded by a wide range of agencies including international organizations such as Action Aid, United Nations Children Emergency Fund (UNICEF), Irish AID, Danish International Development Agency (DANIDA), governmental organizations such as the National AIDS Control Program (NACP), and local nongovernmental organizations such as The AIDS Support Organizations (TASO). The campaigns were aimed at various target groups including youth, orphans, children, people living with HIV/AIDS, employees, and the general public.

Measures

Participating organizations responded to questions on their most recent AIDS preventive communication campaigns run in the past year. The survey was conducted from the middle of September to the end of October, 2003. The measures and operational definitions were the same as those used by Kiwanuka-Tondo and Snyder (2002) and are presented in Table 1. One of the variables was measured with multiple-item scales that required internal consistency. Standard score coefficient α was used to measure scale reliability.

Organization factors. The organization's *focus* on AIDS or HIV was assessed using a single item measure asking whether the organization was started with the overall goal of addressing AIDS related issues or problems.

TABLE 1
Descriptive Statistics for Measures Used

<i>Variable</i>	<i>Mean</i>	<i>Variability</i>	<i>Coefficient Alpha</i>
Message Clarity: Number of crucial points for AIDS prevention in the messages	3.12	<i>SD</i> = 0.88, range = 0–4	.91
Interest Features: Degree to which attention getting devices were used	6.48	<i>SD</i> = 4.29, range = 0–17	
Audience Reach: % people exposed to any campaign messages	76.99	<i>SD</i> = 62.20, range = 0–355	
Number of Channels: Number of channels used in campaign	8.71	<i>SD</i> = 5.55, range = 0–23	
Finances Expended: Total amount of money, in Uganda shillings, spent on the AIDS campaign	23,777	110,818.92, range = 0–1,000,000	
Prior Research: Whether research was conducted at different times during the campaign	.73	<i>SD</i> = 0.37, range = 0–1.44	
AIDS Focus: The overarching organizational goal was focused on	Yes = 77.5%, No = 22.5%		
Number of Target Groups: Number of groups targeted by organization for AIDS campaign	2.54	<i>SD</i> = 1.35, range = 0–6	
Goal Extensiveness: The degree to which campaign goals addressed behavior change	1.19	<i>SD</i> = .84	
Formality of Structure: Formality of the organization	3.00	<i>SD</i> = .80	
Worker Supervision: Frequency of contact between outreach workers & supervisors	2.71	<i>SD</i> = 1.15, range = 1–5	

The degree of *formality* in the organization's structure was assessed with a 2-item index that asked whether the organization had (1) written rules and regulations and (2) a published organizational chart. The extent of the organization's *financial resources* was measured as the total amount of money (in Uganda shillings) spent on AIDS prevention campaigns.

Campaign planning. The extent to which the organization had conducted campaign research was assessed as research conducted: (1) by the organization before the campaign, (2) by other people outside the organization before the campaign, (3) by the organization during the campaign to monitor its progress, and (4) by the organization to evaluate the campaign.

Goal extensiveness was assessed as the degree to which campaign goals addressed behavior, attitude, and knowledge change. A single open-ended question was used: "What were the goals of the campaign?" Answers were coded "3" for behavioral change, "2" to create awareness of the problem, and "1" for general goals, such as to reduce the spread of AIDS. *Number of channels* was measured as a summative index covering radio and TV talk shows, features, ads, and other programs, posters, flyers, brochures, booklets, comic books, videos, plays, concerts, debates, other performing arts, fairs, festivals, marches, telethons, contests, and other events.

Number of target groups was measured as the number of groups targeted by the organization for its AIDS campaigns. This was an additive index consisting of an open-ended list of target groups. *Supervision of outreach workers* was measured as the frequency of contact between outreach workers and supervisors. The levels of frequency were coded as (5) Daily, (4) Weekly, (3) Monthly, (2) Annually, and (1) Quarterly.

Campaign execution. Audience *reach* was measured as the percentage of people in the target group exposed to any of the organization's campaign messages. Reach was calculated as the number of people in the audience exposed to the message divided by number of people intended to receive the message.

Interest features was measured as the degree to which attention getting devices were used in the message. The 17-item scale included elements such as background music, sudden loud voices, children's voices, themes, proverbs, alliteration, color illustrations, songs, slogans, and repetition.

Message clarity was measured as the extent to which the content of the message included information about AIDS prevention. The items measuring clarity included "How many of the communications stated what behaviors reduce the risk of contracting the AIDS virus?" "Did the message indicate the danger of not doing what was recommended?" "Did the message state the benefits of doing what were recommended?" and "Did the message address the objections that people might have to doing the things you want them to do?" This four-item scale had an α reliability of .91.

RESULTS

The hypotheses in the model were tested using Path Model statistical package for path analysis by Hunter and Hamilton (1998), followed by regression analysis using SPSS for confirmation of the path analysis results. Once again we will start with the right side of the model and move backwards (see Figure 4).

CAMPAIGN EXECUTION

The Effect of Audience Profiling on Campaign Effectiveness

H1a states that a greater number of target groups, reflecting the degree of audience differentiation, will be related to increased message reception. The results of the path analysis show a positive association between number of target groups and message reception (Figure 4). The relationship was confirmed by the results of the regression analysis, $R = .25$, $F(1, 66) = 4.36$, $p < .05$.

The results of the path analysis support H1b which states that a greater number of target groups is related to an increased number of interest features in the campaign message. This association is confirmed by the results of the regression analysis, $R = .43$, $F(1, 118) = 26.20$, $p < .001$.

H1c states that increased worker supervision is related to increased message clarity, this is also supported by the results of the path analysis and regression analysis, $R = .31$, $F(1, 94) = 10.24$, $p < .01$.

The Effect of Segment Identification on Interest Features

H2 proposes that a greater number of channels used correlates with an increased number of interest features in the message. The results of the path analysis and regression analysis support this positive association, $R = .53$, $F(1, 101) = 40.23$, $p < .001$.

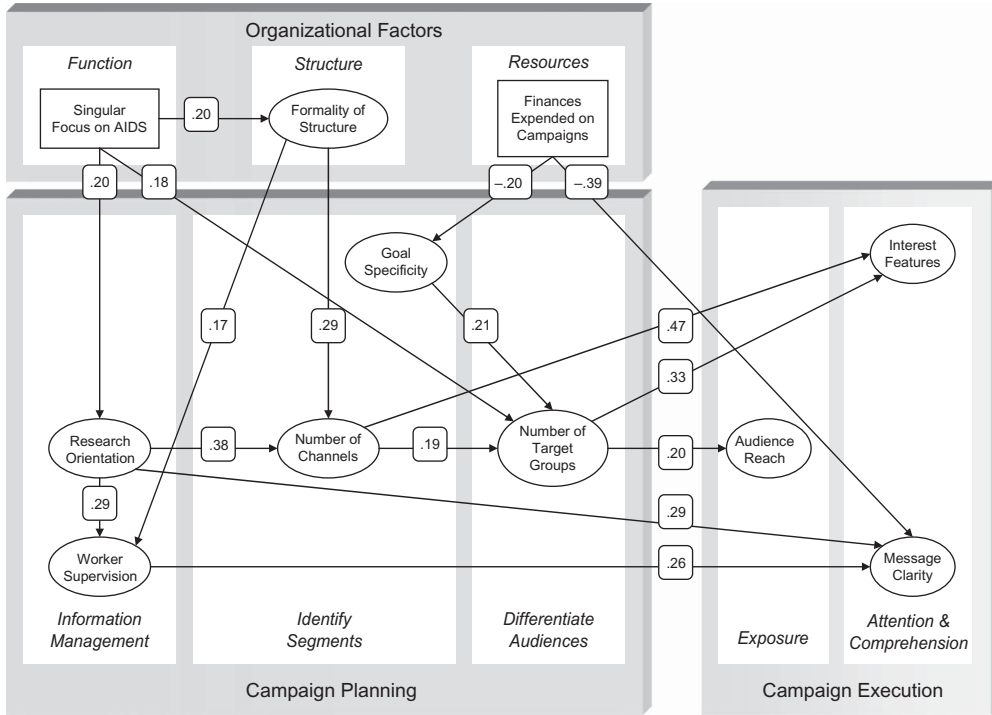


FIGURE 4 Model of effect of organizational and communication campaign design variables on message reception. Note: RMSE = .064, $\chi^2(38,120) = 9.06, p = .91$.

The Effect of Conducting Research on Message Clarity

H3 states that prior research is related to message clarity. The results of the path analysis show that prior research is associated with greater message clarity. The association is supported by the results of the regression analysis, $R = .33, F(1, 89) = 10.94, p < .05$.

CAMPAIGN PLANNING

The Effect of Segment Identification on Audience Profiling

Number of channels. H4a, which proposes that number of channels used will be associated with an increase in the number of target groups, is supported by the results of the path analysis and confirmed by the results of the regression analysis, $R = .23, F(1, 101) = 5.87, p < .05$.

Goal extensiveness. H4b states that goal extensiveness is related to a greater number of target groups. The results of the path analysis and regression analysis support this association, $R = .25, F(1, 118) = 7.67, p < .05$.

The effect of research on segment identification. H5a, which proposes that prior research is related to a greater number of channels employed in the design, was supported by the results of the path analysis and confirmed by the results of the regression analysis, $R = .42$, $F(1, 87) = 18.54$, $p < .001$.

The effect of research on worker supervision. Likewise, H5b, which proposes that prior research is related to increased likelihood of worker supervision was supported by the results of the path analysis and confirmed by the results of the regression analysis, $R = .31$, $F(1, 87) = 9.09$, $p < .05$.

ORGANIZATIONAL FACTORS

Available Resources

Financial expenditures on campaigns. H6 proposes that greater financial resources are related to increased goal extensiveness. However, the results of the path analysis show that there was a negative association between finances expended on the campaigns and goal extensiveness. The association was supported by the results of the regression analysis, $R = .31$, $F(1, 87) = 9.09$, $p < .10$. Similarly, it was anticipated that financial resources would be positively related to the chances of message clarity. However, the results of the regression analysis show that there was a negative association between finances expended on the campaigns and message clarity, $R = .33$, $F(1, 79) = 9.85$, $p < .05$.

Organizational Structure

H7 states that more formal organizational structure is related to the increased number of channels used in the campaign. The results of the path analysis and regression analysis support this association, $R = .33$, $F(1, 95) = 11.78$, $p < .001$. The results of the path analysis also show that formality of the organization is associated with worker supervision which was confirmed by the regression analysis, $R = .28$, $F(1, 92) = 8.11$, $p < .01$.

H8a proposes that organizations with a more focused purpose are more likely to conduct research. This was supported by the results of the path analysis and regression analysis, $R = .28$, $F(1, 92) = 7.53$, $p < .01$. Likewise, H8b states that organizations with a more focused purpose are likely to have less structure, which was also supported by the results of the path analysis and confirmed by regression analysis, $R = .21$, $F(1, 100) = 4.44$, $p < .05$. The results of the path analysis indicated that organizations with a more focused purpose would use more target groups for their campaigns, which was also supported by the regression analysis, $R = .23$, $F(1, 109) = 6.18$, $p < .05$.

Number of Organizations Involved in AIDS Campaigns

Another important finding in the present research is the increased number of organizations involved in AIDS campaigns in Uganda. When Kiwanuka-Tondo and Snyder (2002) collected their data, there were only 135 organizations conducting AIDS campaigns in the country.

When the data for the present research was collected in 2003, the number had more than doubled to 300 organizations. The involvement of government, nongovernmental (NGO), private, and international organizations demonstrates a strong multisectoral approach to health communication which has shown evidence of reducing HIV prevalence in Uganda (Kiwanuka-Tondo, 2006).

DISCUSSION

The present study makes an important contribution to our understanding of factors related to health communication campaign effectiveness broadly and AIDS communication campaigns in Uganda specifically. This is one of the only known studies to empirically test a model of the relationships between organizational factors, campaign planning, and campaign execution. By measuring audience reach, this is the first research study to quantitatively and systematically establish the influence of organizational factors and campaign planning on campaign execution. This is important since the communication/persuasion matrix model suggests that audience exposure is the first among the important steps that lead to attitude or behavior change (McGuire, 1985, 1989). The probability sample of 180 organizations that was used renders this a rigorous study that uses audience reach to build on the earlier model developed by Kiwanuka-Tondo and Snyder (2002), and hence makes a significant contribution to the area of health communication campaigns. Below we examine the implications of our findings starting with campaign execution and following with discussion of campaign planning and finally, organizational structure.

CAMPAIGN EXECUTION

The Effect of Audience Profiling on Campaign Effectiveness

Organizations that identified more differentiated segments among the intended audience exposed their campaigns to a larger percentage of the audience. This suggests that the greater the identification of the differences among the intended audience, the greater the chances that each segment will be reached by appropriate channels and messages, thereby increasing the interest in the campaign, and consequently greater exposure of the campaign. While there are limitations to any organization's ability to capture the most salient differences among audiences at any given point in time (Curtin & Gaither, 2007), this is an important addition to the findings by Kiwanuka-Tondo and Snyder (2002).

The Effect of Segment Identification on Interest Features

It makes sense that organizations that identified more differentiated segments among the intended audience included more interest features in their messages. Conventional wisdom dictates that different segments of the audience will respond to different interest features such as color, rhyme, children's voices in the background, proverbs, riddles, and hence the diversity in the interest features used by the organizations.

The Effect of Conducting Research on Message Clarity, Multiple Channels, and Outreach Worker Supervision

The results of the research by Kiwanuka-Tondo and Snyder (2002) suggest that research is only associated with pretesting of messages. However, the present research establishes a number of important relationships between research and campaign design elements. Prior research was directly related to message clarity. By conducting research, organizations get better knowledge about the audience, such as when different target groups attend to different media. Conducting research is also associated with use of multiple channels. It makes sense that organizations that value research would also appreciate the need to use a variety of channels to the differentiated segments of the intended audience. It is important to note that organizations that conducted research were also more likely to insist on greater supervision of outreach workers. The ability to have direct contact with the audience and relay their perceptions back to supervisors provides one possible interpretation of this finding. Although not directly explored in this study, it seems reasonable that the more culturally sensitive the topic (such as HIV/AIDS and sexual practices) the more outreach workers must learn about each audiences' cultural beliefs, behaviors, myths, and misconceptions. This was illustrated by Curtin and Gaither (2007) in their description of the eradication of the smallpox campaign.

CAMPAIGN PLANNING

The Effect of Segment Identification on Audience Profiling

Number of channels. Organizations that used multiple channels used more interest features and identified more differentiated segments among the intended audience. It makes sense that the more channels an organization uses the more interest features that it needs for each channel. It also makes sense that more differentiated segments within the intended audience leads to greater need for different channels appropriate to each segment.

Goal extensiveness. Organizations that had a more specific campaign goal of promoting behavior change (such as safer sex) were more likely to identify differentiated segments among the intended audience. It is conceivable that those organizations that set clear and specific goals also recognized the need to differentiate audiences based on demographic and psychographic profiles, leading to greater exposure of their campaign messages.

ORGANIZATIONAL FACTORS

Financial expenditures on campaigns. To our surprise, the results show financial expenditures to be negatively associated with goal extensiveness and message clarity. Conventional wisdom would dictate that financial resources would be associated with goal extensiveness as well as message quality, yet this was not the case. It is important to note that organizations with greater financial resources do not necessarily have greater goal specificity or increased message clarity. This means that financial resources may actually have a distracting effect: organizations with greater financial resources may not pay as much attention to the

specificity of their goals and the clarity of their messages. On the other hand, small, less well-funded organizations pay close attention to their goals and their messages to make sure they use their resources wisely. Smaller organizations should therefore not be discouraged by lack of resources, as this study suggests it is not the amount of financial resources devoted to a campaign that is important, but the ability to differentiate target audiences, use appropriate channels to reach them, and make good use of communication with outreach workers.

Organizational structure. The results of this research indicate that the formality of structure of the organization may play an important role in the campaign process since it is positively correlated with the supervision of outreach workers. Again, our assumption was that formal organizations would be stricter, and therefore insist on greater supervision of outreach workers, yet the results suggest otherwise. It is possible that smaller, less formal organizations have an organizational culture that encourages closer interpersonal contact and communication among the staff. Apparently, such an organizational culture may reduce friction and fear and create trust among the staff. It should be noted that most of the organizations in this study falling in this category are small, nongovernmental organizations founded by the communities in their localities. This also suggests a possible link between smaller organizations and greater understanding of their local communities (audiences).

Organizational focus of purpose. The results of the path-analysis by Kiwanuka-Tondo and Snyder (2002) suggest that organizations that were founded with multiple purposes at their inception were more likely to pay more attention to their primary missions and, hence, pay less attention to some of the critical campaign design elements such as conducting research. The results of the present research contradict this, finding that organizations with a singular mission are more likely to conduct research. Apparently, the more focused an organization is (fewer purposes or goals) the more likely it is to pay attention to and invest in critical campaign design elements such as research. The results further indicate that organizations with a more focused goal target a greater number of differentiated segments. In addition, organizations with a singular mission have less formal structure. As mentioned earlier, most of these are small local organizations. The practical implication of many of these findings is that funding agencies interested in supporting effective AIDS campaigns should give more support to small, informal organizations that were founded with a singular mission of running AIDS campaigns since they pay more attention to campaign design elements that are critical to success.

CONCLUSION, LIMITATIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

This is the first systematic and quantitative study to use a large probability sample to develop a theoretical model that establishes the relationships between organizational variables, campaign design variables, and audience exposure to health communication campaigns. The study builds on the pioneering study by Kiwanuka-Tondo and Snyder (2002) that developed a model demonstrating the relationships between organizational factors, campaign design elements, and campaign quality variables. By measuring audience reach in the Uganda AIDS campaigns, the study has contributed to this new area of strategic health communication campaign theory and research.

As with any research endeavor, there are limitations to the claims that can be made based on this project. Specifically, this study is limited by the use of self-report measures and a purely

quantitative analysis. While there is a high level of confidence in the relationships among variables reported here, we can not claim any causal relationships and rely on previous research to provide interpretations of these relationships and their implications for practice. This study also does not include measures of campaign effectiveness such as including data on increased awareness or behavior change.

Finally, and importantly, this research relies on a linear, cognitive model of public relations. While we operate from a systems perspective by noting the importance of a multi-sectoral approach, this paper does not address the complex issues of identity, difference, and power discussed by Curtin and Gaither (2007). This paper also does not address the nonlinearity of social systems, which adds considerable complexity to our understanding of how individuals within a system receive and interpret new information and the process that leads to behavior change (Nowak & Vallacher, 2001).

Despite these limitations, our results point to some intriguing implications for organizations that hope to educate communities about HIV/AIDS prevention and other healthcare-related behaviors. These results suggest that small, grassroots organizations with an informal structure and fewer financial resources than larger organizations can be quite effective. Our results imply that when an organization has a more limited focus (fewer goals), it can strategically target its resources. When field workers develop interpersonal relationships with community members they may build trust, equalize power, and create a dialogue to learn more about their cultural beliefs and practices. This level of interaction allows for increased flexibility in the messages used to educate and influence behavior change, which appears to be more important than having greater financial resources or a highly formalized organizational structure.

Future studies should attempt to replicate the theoretical model to find out whether it is generalizable to other countries with similar situations in Africa such as Kenya, Tanzania, Zambia, Zimbabwe, Lesotho, Botswana, and South Africa where the HIV/AIDS epidemic is already a crisis. The model should also be tested to find out whether it is applicable to other health problems such as obesity, cardiovascular diseases, diabetes, and alcohol and drug abuse, as well as other types of campaigns such as political and public relations campaigns. The model could make an important contribution to the field of communication. Future studies should also attempt to establish a correlation between audience reach and audience behavior change, which could be used to measure effectiveness. Continued investigation of this model in combination with greater attention to the dynamics of identity, difference, and power and nonlinear systems will further contribute to the building of a theoretical model for strategic health communication campaigns and the ultimate design of more effective campaigns.

REFERENCES

- Atkin, C. K., & Freimuth, V. (1989). Formative evaluation research in campaign design. In R. E. Rice & C. K. Atkin (Eds.), *Public communication campaigns* (2nd Ed.), pp. 131–150. Newbury Park: Sage.
- Backer, E. T., Rogers, M. E., & Sopory, P. (1992). *Designing health communication campaigns: What works*. Newbury Park: Sage.
- Backer, E. T., & Rogers, M. E. (1994). Introduction. In E. T. Backer and E. M. Rogers (Eds.), *Organizational aspects of health communication campaigns: What Works* (pp. 1–9). Newbury Park: Sage.
- Berelson, B., Lazarsfeld, P. F., & McPhee, W. N. (1954). *Voting: A study of opinion formation in a presidential campaign*. Chicago, IL: University of Chicago Press.

- Burns, T., & Stalker, G. M. (1972). Models of mechanistic and organic structure. In A. Koya & J. Hage (Eds.), *Organizational systems: A text-reader in the sociology of organizations* (pp. 240–255). Lexington, MA: D. C. Heath and Company.
- Curtin, P. A., & Gaither, T. K. (2007). *International public relations: Negotiating culture, identity, and power*. Thousand Oaks, CA: Sage Publications.
- Flay, B. R., & Sobel, J. L. (1983). The role of mass media in preventing adolescent substance abuse. In Glynn, T. J. et al. (Eds.), *Preventing adolescent drug abuse: intervention strategies*, (p. 5–35). Rockville, MD: National Institute on Drug Abuse.
- Hamilton, M. A., Hunter, J. E., & Boster, F. J. (1993). The elaboration likelihood model as a theory of attitude formation: A mathematical analysis. *Communication Theory*, 3, 50–65.
- Holtgrave, D. R., Qualls, N. L., Curran, J. W., Valdiserri, R. O., Guinan, M. E., & Parra, W. C. (1995). An overview of the effectiveness and efficiency of HIV prevention programs. *Public Health Reports*, 110(2), 134–146.
- Hornik, C. R. (1988). *Development Communication: Information, Agriculture and Nutrition in the Third World*. New York, NY: Longmans.
- Hornik, C. R. (1989). Channel Effectiveness in Development Communication Programs. In R. E. Rice. and C. K. Atkin (Eds.), *Public Communication Campaigns* (2nd. ed., pp. 309–330). Newbury Park: Sage.
- Hunter, J., & Hamilton, M. A. (1998). *Path Model Computer Statistical Package*.
- Keyton, J. (2006). *Communication research: Asking questions, finding answers*. New York: McGraw-Hill.
- Kiwanuka-Tondo, J. (2006). *Public Policy, Organizations and HIV/AIDS in Africa: An analysis of the strategies and preventive programs in Uganda, Kenya, and Tanzania*. Paper presented at National Communication Association Convention, San Antonio, Texas, November 26–30, 2006.
- Kiwanuka-Tondo, J. & Snyder, L. B. (2002). The influence of organizational characteristics and campaign design elements on communication campaign quality: Evidence from 91 Ugandan AIDS Campaigns. *Journal of Health Communication*, 7(1), 59–77.
- Lazarsfeld, P. F., Berelson, B., & Gaudet, H. (1948). *The people's choice*. New York: Columbia University Press.
- Manoff, K. R. (1985). *Social marketing: New imperatives for public health*. Westport, CT: Praeger.
- McGuire, W. J. (1985). The nature of attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., Vol. 3, pp. 233–346). New York: Random House.
- McGuire, W. J. (1989). Theoretical foundations of campaigns. In R. E. Rice & C. K. Atkin (Eds.), *Public communication campaigns* (2nd ed., pp. 43–65). Newbury Park, CA: Sage Publications.
- Mendelsohn, H. (1973). Some reasons why information campaigns can succeed. *Public Opinion Quarterly*, 37(1), 50–61.
- Ministry of Health and ORC Macro (2006). Uganda: HIV/AIDS sero-behavioural survey 2004–05. Kampala, Uganda: Ministry of Health.
- Newhagen, E. J., & Reeves, B. (1992). The evening's bad news: Effects of compelling negative television news images on memory. *Journal of Communication*, 42(2), 25–40.
- Nowak, A., & Vallacher, R. R. (2001). Societal transition: Toward a dynamic model of social change. In W. Wosinska, R. B. Cialdini, D. W. Barrett, & J. Reyskowski (Eds.), *The practice of social influence in multiple cultures* (pp. 151–171). Mahwah, NJ: Lawrence Erlbaum Associates.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.
- Shimp, A. T. (1993). *Promotion management and marketing communications* (3rd. Ed.). Orlando, FL: Dryden Press.
- Snyder, L. B., & Hamilton, M. A. (2002). Meta-analysis of U.S. health campaign effects on behavior: Emphasize enforcement, exposure, and new information, and beware the secular trend. In R. Hornik (Ed.), *Public health communication: Evidence for behavior change*, (pp. 357–383). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Stephens, K. K., Rimal, R. N., & Flora, J. A. (2004). Expanding the reach of health campaigns: Community organizations as meta-channels for the dissemination of health information. *Journal of Health Communication*, 9(1), 97–111.
- Stewart, D. W., & Ward, S. (1994). Media effects on advertising. In J. Bryant & D. Zillman (Eds.), *Media effects: Advances in theory and research* (pp. 61–90). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Uganda AIDS Commission (2000). *HIV/AIDS strategic planning in Uganda: Summary of the National strategic framework for HIV/AIDS activities in Uganda, 2000/1–2005/6*. Kampala: Uganda AIDS Commission Secretariat.
- Uganda AIDS Commission. (2002). *Uganda AIDS Commission: Together We Share the Challenge*. Kampala: Uganda AIDS Commission Secretariat.
- UNAIDS (2007). AIDS epidemic update. Retrieved July 10, 2007, from http://www.unaids.org/en/Regions_Countries/SubSharanAfrica.asp.
- Woods, D. R., Davis, D., & Westover, B. J. (1991). "America Responds to AIDS": Its content, development process, and outcome. *Public Health Reports* 106(6), 616–622.