



Entertainment-Education in Radio: Three Case Studies from Africa

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Introduction

This chapter presents the findings from radio programs in three African countries that were developed using a specific entertainment-education methodology, applied by Population Media Center (PMC). Over its 20-year history, PMC has developed over 50 entertainment-education serial dramas in over 54 countries, reaching over 500 million people worldwide.

Background

Radio serial dramas using entertainment-education have been shown in numerous settings to increase use of family planning, increase spousal communication about fertility and family planning, motivate HIV testing, and change attitudes toward girls and women (Piotrow et al. 1990; Nariman 1993; Rogers et al. 1999; Ryerson 2010; Bertrand and Anhang 2006; Singhal et al. 2004; Smith et al. 2007; Vaughan and Rogers 2000; Westoff and Bankole 1997; Barker 2012). Though “the mass media alone seldom effect individual change” (Papa et al. 2000, p. 33), it can influence social norms and stimulate community dialogue and discussion on important social and health topics (Papa et al. 2000; Rogers et al. 1999; Vaughan and Rogers 2000). As a result, even those who have not tuned into a program can examine previously held beliefs, consider options, and identify steps to adopt novel behaviors and attitudes attained through interactions and discussions with the primary audience of an entertainment-education drama (Rogers 2004).

Theoretical Underpinnings

Audiences across the globe have experienced such transformations thanks in part to the use of PMC’s entertainment-education methodology which is based on an integrated multidisciplinary theoretical framework that uses a long-running serial drama format (Nariman 1993). A long-running format lends to audience behavior change because it allows time for (1) audience members to identify with characters, (2) characters to change their own attitudes at a believable pace, and (3) audience members to test the attitudinal and behavior changes themselves (Ryerson 2010). Each aspect of a PMC methodology drama is developed according to a theoretical and empirical research-based formula in order to reinforce a coherent set of interrelated values that is tied to specific prosocial behaviors. Social cognitive theory (SCT) and other theories in entertainment-education (Barker 2012; Sood et al. 2004) play a prominent role in the PMC methodology via the use of role-modeled behaviors. According to SCT theory, learning can occur via mediated role models who inspire increased confidence or self-efficacy to perform a specific behavior. Not only can new behaviors be learned from such models, but many cognitive and affective responses to a behavioral situation can be learned as well (Bandura 1986).

Program Development

The PMC methodology for developing dramas for social change is a well-tested entertainment-education methodology, based on role modeling rather than dictating. PMC-style dramas consist of positive, negative, and transitional characters to model behaviors, with the latter characters being crucial to the promotion of positive behavior change. Characters may begin these long-running series exhibiting the antithesis of the values being promoted, but through interaction with other characters, twists, and turns in the plot, and sometimes even outside intervention, they come to see the value of the program's underlying messages. The audience observes the positive benefits enjoyed by these characters resulting from their new attitudes and behaviors and is motivated by their emotional ties with these characters to adopt similar values. The high entertainment value of such dramas leads to widespread popularity and significant audience share. The resulting large audience following along each week, adjusting their behaviors and values, make this approach the most cost-effective method of behavior change communications, on a per-behavior change basis.

Good dramas have to be local and relatable. PMC hires and trains local producers, writers, directors, and actors to create social and behavior change communication (SBCC) programs that are culturally sensitive and appropriate on radio or TV in the form of a serial drama. The issues addressed in each program are based on the concerns and policies of the host country and the findings of thorough research on the values, norms, and customs of the people of that country.

Research-Based Programs

PMC's methodology for developing social content serial dramas is grounded in thorough research (qualitative and quantitative research), which is conducted prior to (formative), during (monitoring), and after the program (summative evaluation). PMC contracts with independent local research firms to conduct all research activities for its programs.

Formative Research

Cognizant of countries' diversity in culture, values, languages, media markets, and constantly changing contexts, PMC dramas begin with extensive formative research based on qualitative approaches. Focus group discussions and individual in-depth interviews are conducted within the community to identify health and social processes of concern and to assess potential audience members' attitudes toward these issues. The formative research also helps to identify country laws and policies and the availability of health, social, and environmental services that are critical to any social behavior change program. It also assesses media habits and ideal listening/viewing times of potential audience members and includes a pretest of preliminary

versions of the first four episodes of the drama. Thus the formative research enables the creative team to design appropriate, realistic, and credible characters, settings, and story lines that are realistic and engaging to members of the target audience. Local staff establishes a production advisory committee to assure high-quality and appropriate content of the program.

Service Points Monitoring

Quantitative monitoring surveys of service points around the final quarter of a drama broadcast are one of several monitoring activities that PMC employs. The objectives of the clinic monitoring research are to evaluate (1) whether the drama program influenced listeners in the broadcast areas to seek services (health, social, or environmental) that were promoted by the program and (2) the popularity of the drama. The contracted local research firm conducts the survey with a convenience sample of service points drawn from both urban and semi-urban/rural segments of the broadcast areas, including government-operated, private, and nongovernmental organization (NGO) service points. Clients are randomly selected as they exit the facilities and interviewed on (1) their motivation to seek services that day, (2) whether they listen to the drama or not, and (3) whether people in their community/village listen to the drama or not.

Summative Evaluation

The summative or end line evaluation is conducted at the end of broadcast and draws on a mixed-methods (quantitative and qualitative) approach to assess the impact of the drama. Primary data collection for the quantitative end line survey includes individual face-to-face interviews with a statistically representative sample of the target audience. The purpose of the end line survey is to generate information on socioeconomic, demographic and health, and environmental indicators that can be used for measuring progress in achieving project objectives and to evaluate the overall impact at the end of the project period. An additional exposure module that contains questions about frequency of listening, appeal, and character recognition is included in the survey instrument. The impact of the drama is determined by making statistical comparisons between respondents who report listening to the program versus those who did not on key indicators controlling for potentially influential sociodemographic factors. Exposure to a drama is the independent variable and is derived from respondents that listened to a drama one or more times weekly.

Case Studies

Nigeria: *Ruwan Dare* (Midnight Rain)

Nigeria is one of the most unique, and most challenging, countries in the world. It is the most populous country in Africa (Population Reference Bureau 2018), and its borders encircle peoples of many different ethnicities, cultures, and languages. The states of northern Nigeria, which are remote and desolate, have historically been a difficult place to work, especially for social service and development agencies. However, it is here that one finds the poorest health and socioeconomic indicators in Nigeria (NPC and ICF Macro 2009). PMC produced *Ruwan Dare* (Midnight Rain) in Nigeria. This 208-episode radio serial drama aired July 2007 through July 2009 in four northern states in Hausa, the most widely spoken and understood language in that area. It was also rebroadcast from July 2009 through November 2010. In addition to the radio serial drama, PMC used its whole society strategy to create a radio talk show aimed at engaging listeners. The radio talk show allowed people to phone in and talk about the issues addressed in *Ruwan Dare*.

The northwest region of the country, including Kano, Kaduna, Katsina, and Sokoto states, was identified as the target region for broadcast because this region has the lowest levels of knowledge of contraceptive methods, ever use of contraceptives, education, and exposure to family planning messages in Nigeria. These states also have the highest fertility rates, largest desired family size (between six and ten children), highest population growth rates, and highest rates of unmet need for contraception in Nigeria (NPC and ICF Macro 2009).

Clinic Monitoring

To monitor the effects of the program on listeners' behaviors, PMC established 11 clinic research sites in the 4 states and conducted 4 rounds of clinic exit interviews with a purposive sample of new clinic clients. Results found *Ruwan Dare* increasingly motivated new clients to seek family planning and reproductive health services with the last round of interviews indicating that 67% of new clients named *Ruwan Dare* as the direct or indirect source of influence to seek family planning and/or reproductive health services for the first time.

Impact Evaluation

Multivariate analysis that controlled for influencing factors of age, marital status, urban/rural location, education, and sex revealed that exposure to the program had an impact on listeners.

Figure 1 presents results of the evaluation in adjusted odds ratios derived from multivariate analysis. Results found that *Ruwan Dare* impacted several of the indicators measured in the evaluation, including knowledge, attitudes, and behaviors. In terms of behaviors, listeners were 2.4 ($p \leq 0.05$) times as likely as non-listeners to say they "currently use something to delay or avoid pregnancy" and listeners were 1.7 ($p \leq 0.05$) times as likely as non-listeners to say they "discuss family planning with others." Similarly, attitudes relating to attitudes were impacted by the drama, especially the indicators measuring gender attitudes/women's

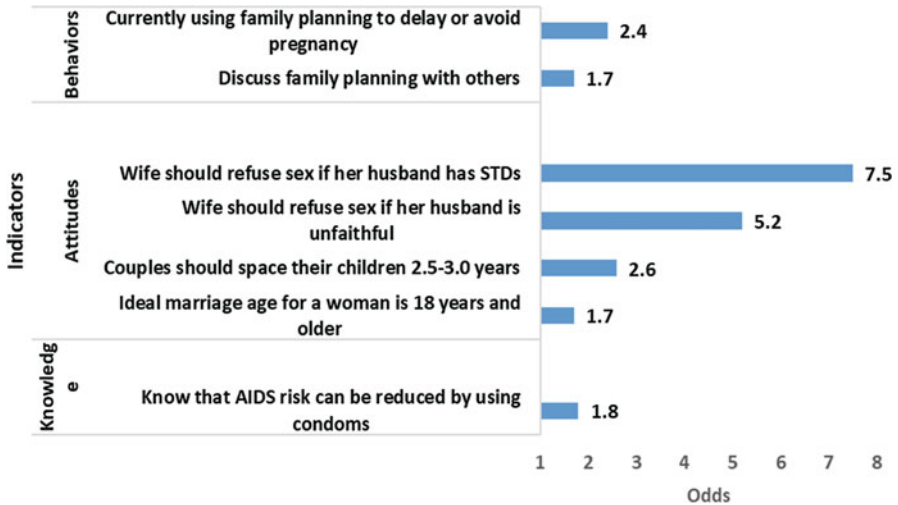


Fig. 1 Multivariate effects of listening to *Ruwan Dare*, 2009 adjusted odds ratios comparing listeners and nonlisteners at least $p < 0.05$

empowerment. Thus, attitudinal indicators (four in all) were the most impacted followed by behaviors (two indicators), with knowledge indicators being the least impacted. These results are promising given that a change in attitudes precedes any form of behavior change.

Ruwan Dare was not only successful in changing behaviors and attitudes, but it was also one of PMC's most cost-effective dramas. With 70% of the population in the broadcast area listening, *Ruwan Dare* proved to be a remarkably popular series. After adjusting for age (using 2007 state-level census estimates for Nigeria), it was determined that approximately 12.3 million people in the four states listened to *Ruwan Dare*. It catalyzed 1.1 million new family planning users with 60% of listeners agreeing that *Ruwan Dare* was both "entertaining and educational." The cost per listener was calculated to be \$0.08 US cents, and the cost per behavior change (new adopter of family planning) was only \$0.30 US cents.

Burundi: *Agashi* (Hey, Look Again!)

Burundi is a small landlocked country in East Africa, about two-thirds the size of Switzerland with a population of about ten million (PRB 2017). Today, Burundi is one of the five poorest countries in the world (World Bank 2017), and the Population Institute has ranked Burundi the fourth most vulnerable state in their 2015 Demographic Vulnerability Report. Burundi's annual population growth rate is 3.21%, which, if unchanged, means its population is projected to double in 22 years. PMC produced *Agashi* ("Hey! Look Again!") in Burundi. This 208-episode radio serial drama aired from January 2014 to January 2016 in Kirundi, Burundi's national language.

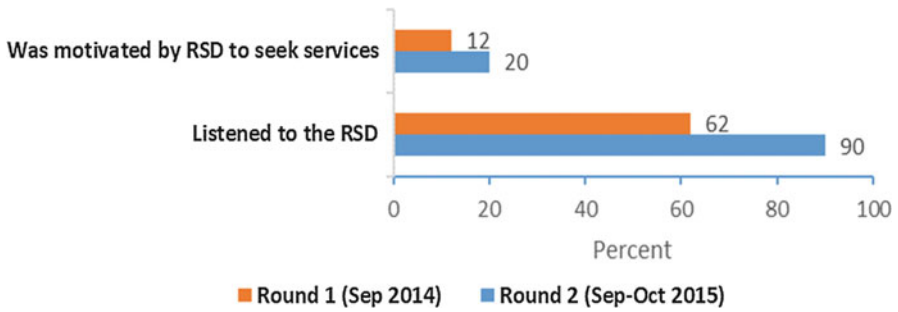


Fig. 2 Clinic monitoring survey of FP/RH services Burundi radio serial drama, *Agashi* 1.0

Clinic Monitoring

Figure 2 shows the results of two rounds of exit surveys that were conducted in randomly selected facilities in September 2014 (Round 1) and from September to October 2015 (Round 2). Sixty percent of 1,224 clinic clients surveyed reported listening to *Agashi*; this figure increased to 90% of 1,236 clients surveyed in 2015. In 2014, 12% of the 1,244 clients surveyed cited the program as their primary motivation for attending the clinic; this figure increased to 20% of clients in 2015, meaning that 1 in 5 clients sought health services as a result of the program (see Fig. 2).

Impact Evaluation

Figure 3 shows the effects of the Burundi radio serial drama *Agashi* in adjusted odds ratios from multivariate analysis. Like *Ruwan Dare*, *Agashi* impacted many indicators measured in the evaluation, including indicators not only in the knowledge, attitudes, and behaviors categories but also an indicator in the self-efficacy category (see Fig. 3).

In terms of behaviors, listeners were 2 ($p \leq 0.007$) times more likely than non-listeners to say they treated childhood diarrhea with homemade oral rehydration solution (ORS) recommended by government and 1.7 ($p \leq 0.025$) times more likely than non-listeners to say they visited a health facility for information on the secondary effects of family planning in the past 12 months. Regarding self-efficacy, listeners were 1.7 ($p \leq 0.007$) times more likely than non-listeners to say they can confidently negotiate condom use with their sexual partner. Unlike *Ruwan Dare* where attitudinal indicators were the most strongly impacted, the most strongly impacted indicators by *Agashi* fall under the knowledge category (bottom of Fig. 3).

The evaluation also found *Agashi* to be very popular and cost-effective. Eighty-one percent listened to the series at least once weekly, which translates into an estimated national audience size of 2.25 million Burundians. The cost per listener of \$0.74 cents (US) is higher than found for *Ruwan Dare* but still cost-effective, and the average cost per behavior change (over five behaviors) attributable to *Agashi* is \$6.70 (US). Cost per adopter of voluntary HIV testing is \$1.13 (US) and per adopter of ORS is \$2.11 (US).

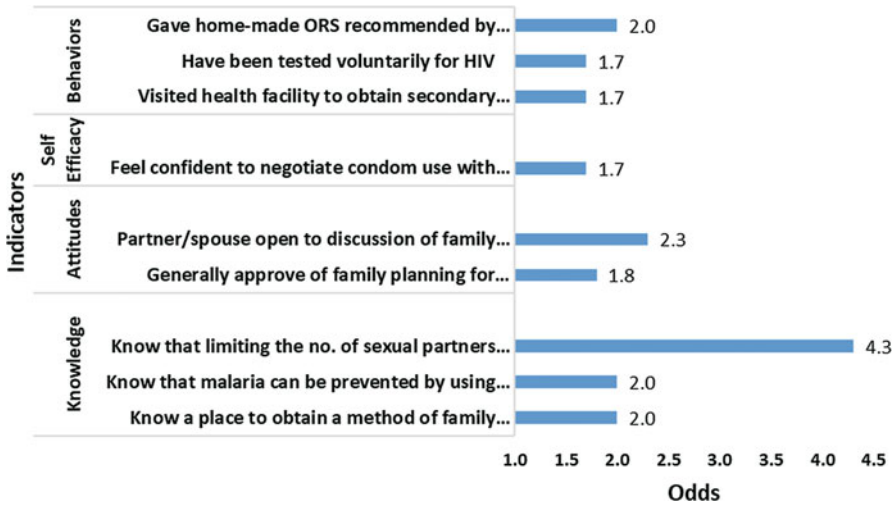


Fig. 3 Multivariate effects of listening to *Agashi*, 2015 adjusted odds ratios comparing listeners and nonlisteners at least $p \leq 0.05$

Burkina Faso: *Yam Yankré (The Choice)* and *Here S'ra (The Road to Happiness)*

Burkina Faso is a country approximately the size of New Zealand with a population of almost 16 million located in West Africa. The fertility rate in Burkina Faso is the seventh highest in the world (PRB 2017), driven by large family size. In general, men and women want large families, but 24% of married women ages 15–49 reported that they would like to space or limit births, but they're not currently using any method of family planning (INSD and ICF 2012). The top reasons married women cited for not using a modern method of contraception are the desire for more children (18%); personal, partner, or religious opposition (17%); fear of health effects (10%); and not knowing a method or a source (10%). Cost is cited by 2.5%, and lack of access is cited by 0.7% (StatCompiler 2017). To address these issues, PMC produced *Yam Yankré (The Choice)* in Mooré and *Here S'ra (The Road to Happiness)* in Djoula, two unique radio serial dramas of 156 episodes each, which aired from September 2012 through March 2014.

Clinic Monitoring

Clinic monitoring results show an increased uptake in family planning and reproductive health services during program broadcast, and the program was a contributing factor to the observed demand for services. Results found that 25% of new family planning and reproductive health clients surveyed said they sought services because of a radio program.

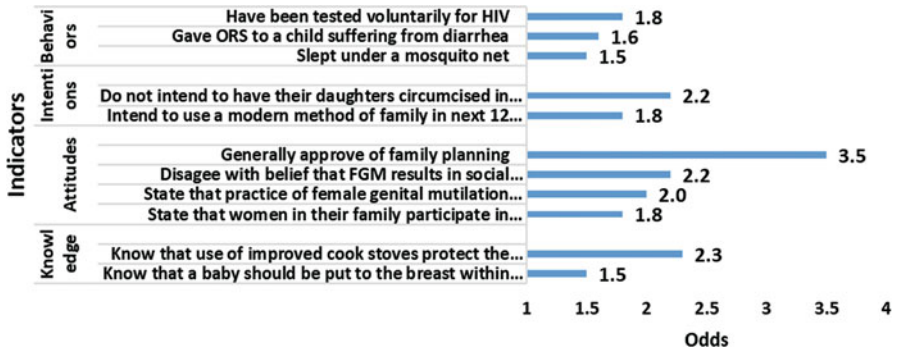


Fig. 4 Multivariate effects of listening to *Yam Yankre* or *Here S'ra*, 2014 adjusted odds ratios comparing listeners and nonlisteners at least $p \leq 0.05$

Impact Evaluation

Results of the summative evaluation in adjusted odds ratios using multivariate analysis are presented in Fig. 4 above. Results reveal that the program succeeded in positively changing audience knowledge, attitudes, intentions, and behaviors regarding family planning, child health/nutrition, female genital mutilation (FGM), HIV/AIDS, and sustainable environmental practices. With respect to knowledge, the dramas impacted two new thematic indicators not observed in the Nigeria and Burundi case studies, including the environment and child health/nutrition. Listeners were 2.3 ($p \leq 0.004$) times more likely than non-listeners to say that the use of improved cook stoves can protect the environment and 1.5 ($p \leq 0.004$) times more likely than non-listeners to know that a baby should be put to the breast within an hour of birth. Similarly, under the intentions category, two thematic indicators not impacted by *Ruwan Dare* nor *Agashi* were found to be positively impacted: listeners were 2.2 ($p \leq 0.038$) times more likely than non-listeners to say that they do not intend to have their daughters circumcised in the future and 1.8 ($p \leq 0.005$) times more likely than non-listeners to say they intend to adopt a modern method of contraception to limit the number of children. Regarding behaviors, while two (voluntary testing for HIV and treating diarrhea with a homemade solution) of the three indicators influenced by the dramas are not new, the third is. It relates to maternal health where listeners were observed to be 2.2 ($p \leq 0.016$) times more likely than non-listeners to say that they slept under a mosquito net the night before. As observed with *Ruwan Dare*, the effects of the dramas are strongest under the attitudes domain, with four indicators impacted. For instance, listeners were 3.5 ($p \leq 0.007$) times more likely than non-listeners to state that they generally approve of family planning. The other three indicators pertain to gender and reproductive health issues. On these indicators, results indicate that listeners, when compared to non-listeners, were 2.2 ($p \leq 0.046$) times more likely to state that they disagree with the belief that FGM results in social acceptance, 2 ($p \leq 0.014$) times more likely to state that the practice of FGM should disappear, and 1.8 ($p \leq 0.014$) times more likely to state that women in their family participate in decisions regarding the education of children.

Clinic monitoring estimated listenership to the two programs at approximately six million people. Regarding cost-effectiveness, the evaluation research on the impact of *Yam Yankré* and *Here S'ra* revealed that the cost per listener was \$2.00 (US). While this cost per listener is higher than those found for *Ruwan Dare* and *Agashi*, the cost per adoption of behavior attributable to one or both dramas is relatively low. It is \$3.00 (US) for treating childhood diarrhea with ORS and \$4.00 (US) each for voluntary HIV testing and for sleeping under a mosquito net.

Conclusion

As has been proven in other parts of the developing world, the above three case studies (Nigeria and Burkina Faso from West Africa and Burundi from East Africa) indicate that PMC's serial drama methodology is replicable. The case studies also indicate that while each drama follows the same production process, the outcomes are anything but formulaic, yielding unique and powerful stories capable of generating social and behavior change. This is because the linchpin of the methodology is its thorough qualitative and quantitative research of the local context prior to program development. The methodology places the audience at the heart of the program, using formative audience research prior to the first broadcast and monitoring research with audience participation during the entire broadcast. Thus, the creative team is able to gain insights into audience responses to the characters and story lines during the creative process, resulting in a feedback loop that allows for adjustments by the creative team, which ultimately leads to audience engagement, realism, and authenticity. Of note is the methodology's ability to address very sensitive issues that are usually shrouded in secrecy as evidenced by the indicators being investigated here. Finally, the observed level of cost-effective impact proves the efficiency of such an extensive communication campaign designed to promote long-term behavior changes.

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