

How Mass Media Brings about Changes of Social Behavior in Developing Countries: A Case Study of the Radio Program *Bhanchhin Aama* in Nepal

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ABSTRACT

This article presents a case study that explores how mass media induces changes in social behavior in developing countries. The radio program, Bhanchhin Aama (“Mother Knows Best”) is a communication strategy applied within the the United States Agency for International Development-funded Suaahara (“Good Nutrition”) Project in Nepal. This project deploys an entertainment–education strategy and interpersonal communication to generate community-based discussions and foster society-wide changes in social behavior. The study data were compiled from relevant documents posted on official websites and from in-depth interviews conducted with program staff and audiences. The analysis revealed that the radio program’s communication strategy has significantly contributed to transforming the development communication paradigm from being top-down to becoming bottom-up, which is more effective for inducing social behavioral changes.

Keywords: Mass media, Development communication, Social behaviour change, Developing countries

1. INTRODUCTION

The question of how mass media promotes social development is central in development communication and has long received considerable scholarly attention. The concept of development communication, which was first introduced by Lerner (1958), has been variously defined at different times. Development communication is widely considered to be a process that deploys communication strategies and technologies to bring about development (Rogers, 1976). The role of mass media in development communication has varied according to the theoretical lens used. Many researchers have acknowledged the significance of the participatory paradigm (Freire, 2018; Macbride, 1980; White, 1999), thus confirming its relevance as a model for encouraging marginalized people to participate in the development process. It is noteworthy that mass media was viewed as a “*magic multiplier*” of development advantages in developing countries during the early stage of development communication theory, thus greatly exaggerating its influence (Fair, 1989). The significance of mass media in bringing about social change in developing societies has been widely acknowledged by scholars (Manyozo, 2008; Quebral, 1988). Although the impact of mass media in development communication has been downplayed, the media remains an indispensable component of many development communication programs. Moreover, studies that have investigated the influence of mass media on social change in developing countries have burgeoned since the 1980s, given the penetration of media resources in these areas (Singhal & Rogers, 1988). Along with globalization, the rapid development of media and information technology has facilitated the upgrading of methods of communication within many development communication projects. It is essential to understand how mass media brings about social change in developing countries in the contemporary global economic and cultural context. The case study reported here is that of a Nepali radio program, *Bhanchhin Aama* (“*Mother Knows Best*”), which is a communication campaign under the United States Agency of International Development (USAID)-funded Suaahara (“*Good Nutrition*”) Project. The Project was developed by the Johns Hopkins Center for Communication Programs (JHCCP), with the aim of fostering changes in social behavior. Nepal is one of the poorest countries in the world, and traditional Nepali society is beset by numerous social problems, which have attracted the attention of many organizations seeking to design and operate development communication programs to promote social progress in the country. An analysis of communication strategies deployed within a development program in Nepal will help to elucidate the role of

mass media within the current paradigm of development communication. The aim of this radio program is to improve maternal and infant nutrition and hygiene behaviors and advance local people's knowledge of relevant issues. The *Bhanchhin Aama* radio dramatization and the *Hello Bhanchhin Aama* live call-in program are the main components of the radio program, which utilizes a combined strategy of entertainment and education and interpersonal communication to strengthen its effectiveness in changing the behavior of the target audience by sparking extensive discussions at the household and community levels. The case study method was selected as the primary research method for accomplishing the study's objective.

2. LITERATURE REVIEW

2.1 Definition of development communication

The phrase "*communication for development*" first appeared in Lerner's (1958) study on communication and development in the Middle East. Development communication is also aimed at establishing a social system and using approaches and rules to bring about social change in developing areas (Quebral, 1988). Subsequently, communication scholars began to realize that the media could contribute to changing people and societies from being traditional to becoming modern (Fair & Shan, 1997). According to Rogers (1976), development communication can be defined as the utilization of communication research, technologies, and theory aimed at achieving social progress. Development can be seen as a process of social transformation that leads to societal and economic improvement. A focus on the exchange of opinions across all sectors of society can lead to more people getting involved in the process of social change. Communication techniques and the media serve as tools for promoting development by enabling individuals to experience and lead their own process of advancement (Fraser & Villet, 1994).

2.2 Theories of communication for development

2.2.1 Communication and modernization: During the period 1950–1970, the modernization paradigm prevailed on the world stage (Mowlana, 1996). Viewed by many scholars as the most effective approach, economic development was the dominant development paradigm during this period (Hagen, 1962; McClelland, 1961; Rostow, 1959). This paradigm primarily focused on economic growth measured by gross national product (GNP). Western countries were considered advanced, which implied that they were capable of coping with social, cultural, and economic problems that arose during the development process. Conversely, Third World nations were regarded as traditional and lacking such abilities for societal construction during this period. The mass media was regarded as a useful tool that could be used to influence individual's attitudes and behaviors. The modernization approach is described in Daniel Lerner's *The Passing of Traditional Society* (1958). In this book, Lerner claimed that mass media plays a significant role in boosting the process of modernization because of its ability to introduce new concepts, values, and technologies into closed traditional societies and to change lifestyle behaviors. The modernization paradigm focuses on the significant role of mass media in delivering modern messages to traditional communities. Melkote (2003) pointed to critical appraisals of the modernization paradigm since the 1970s. Moreover, the deployment of mass media in development was criticized as a one-way, top-down approach for transmitting messages from development providers to receivers.

2.2.2 A combined strategy of entertainment and education: The combined entertainment and education approach is a widely used communication strategy within development projects. This approach is used to integrate educational information into popular media products intended for entertainment, with the specific aim of influencing individuals' awareness, attitudes, and behaviors toward particular social problems (Kaiser Family Foundation, 2004). Brown & Walsh-Childers (2002) demonstrated that a combined entertainment–education strategy serves as a unique method for bringing about a transformation in attitudes and behaviors because audiences are less likely to resist a persuasive message. Blumler & Katz (1974) applied the uses and gratification model, whereby the target beneficiaries can choose media products that actively meet their needs. Their research findings demonstrated that target groups tend to choose radio and television programs to satisfy their demands. The new trend of increasing commercialization of television programs in developing countries offers a platform for the development of entertainment–education programs, viewed as a communication strategy in which educational content is combined with entertainment programs.

Brown & Singhal (1999) argued that entertainment–education programs play a significant role in bringing about social change either directly or indirectly. They help to transform an individual’s awareness and behavior toward a satisfying outcome. At the societal level, they play the role of an agenda setter, influencing public opinion and the policy-making process. Papa et al. (2000) examined the influence of an Indian entertainment–education radio soap opera, *Tinka Tinka Sukb* (“*Happiness Lies in Small Pleasure*”). They argued that entertainment–education programs could significantly improve the effectiveness of social change by directing the audience’s attention toward appropriate behaviors. Moreover, when listeners establish social connections with the roles portrayed in entertainment–education programs, they may start to reflect deeply about changes in their own behaviors. The function of mass media is not to affect an individual’s behavior directly but rather to draw considerable public attention and generate conversations within audiences.

2.2.3 Participatory theory: Participatory action research entails an experiential methodology, which serves as a powerful model for cultivating shared knowledge and stimulating the abilities of marginalized people. This method is deployed to encourage those situated at the bottom rung of society to initiate social activities to increase popular knowledge. The knowledge generated using the method tends to be local and non-Western (Friesen, 1999). According to Jacobson (1994), the participatory paradigm is the starting point for promoting awareness of a broader range of cultural diversity between various nations and especially between countries in the West and those in the East.

Many scholars have highlighted the importance of the participatory model (Freire, 2018; Macbride, 1980; White, 1999). Freire (2018) argued that everyone has a right to participate. The participatory model plays a vital role in the decision-making process for promoting social change. This process requires the adoption of a completely new attitude for transforming habitual thinking, which gives full consideration to the dignity and equality of individuals from different backgrounds, whose behaviors differ (MacBride, 1980). Viewing participatory research as an effective way of involving marginalized people in the development process, the importance of this approach was fully affirmed. The participatory method is acknowledged to be a model that can reverse the leading position of Western countries in development projects (White, 1999). This paradigm raises more unobtrusive goals for development and for effective communication for development. The strategies utilized are considered more democratic than those of earlier models, emphasizing participation of the masses and horizontal communication as opposed to an emphasis on the role of experts and elites. The participatory model permits those with experience in achieving social shifts to define the aims, pace, and scope of a project, ensuring their involvement in development programs (Sparks, 2007).

3. METHODS AND MATERIALS

3.1 Methods selected

For this research, the case study research method, which is a qualitative method well suited for obtaining more detailed information at a broader scale, was applied as the principal method. This research method is used to investigate and analyze an individual or collective case, aimed at capturing the complexity of the research object (Stake, 1995). A comprehensive study of an appropriate example within the field of communication, entailing the collection of official documents and in-depth interviews, a case study can help to elicit assumptions and derive conclusions. Two main research methods were employed in this case study, namely document analysis and in-depth interviews with individuals who have designed this program and with members of the audience. The combined use of these two research methods provides for a comprehensive understanding of the situation and impacts of this radio program, which fulfills the study objectives.

3.2 Data sources

3.2.1 Analysis of published documents: An analysis of existing information and data conveys a particular point of view and contributes to the research topic. The official websites of the key participating organizations contain information, which includes program objectives, research methods, communication strategies, evidence of effectiveness, and examples of audience feedback, thus enabling a more in-depth

discussion and analysis of the radio program. At the same time, collecting and organizing relevant information and data produced by the official organization that has designed this radio program contributes to answering the research question more rigorously and objectively.

3.2.2 In-depth interviews: Interviewing is an ideal method for collecting detailed information pertaining to the research topic and is especially effective for understanding a participant's experiences through the information they give. In-depth interviews enable researchers to obtain more detailed information, while allowing for flexibility in the research process. Furthermore, online interviews enable researchers to establish contact with people at considerable distances from where they are located (Wimmer & Dominick, 2003).

Unlike structured interviews, semi-structured interviews provide sufficient flexibility for holding different conversations with different interviewees. In this study, semi-structured interviews were conducted with two interviewees via Facebook chat window, while structured interviews were conducted with two different interviewees via email exchange. A checklist of questions and the scope of discussion were pre-designed for adaptation to the two different types of interviews. The interview process using Facebook as the medium entailed flexibility in the questions asked, assuming the form of a dialogue with the respondents. Questions were designed according to the various answers provided by the interviewees. The use of emails as the interview medium enabled interviewees to answer questions more comprehensively and carefully. Interviewees were sent four questions, which were restricted in their range.

4. THE CASE STUDY

4.1 Background

Nepal is one of the poorest countries in the world. Approximately 55% of Nepal's population lives below the poverty line (Feed the Future, 2010). Following a decade of violent conflict, which ended in 2006, Nepal is experiencing enduring social transformation on a path to peace and stability. Nevertheless, there are numerous challenges entailed in Nepal's development process, including the low road density, limited social resources, and vulnerability to climate change and natural disasters. A total of 80% of the population is engaged in the agricultural sector, which only accounts for 38% of the GDP (Feed the Future, 2010). Economic recession and political unrest have resulted in food shortages and high levels of malnutrition, which significantly impact the lives of women and children in mountainous areas.

Whereas the percentage of children who are exclusively breastfed has risen in recent years, the proportion of stunted and underweight children has come down. Nevertheless, 41% of children under 5 years old (60% of whom are located in the western mountainous region) are stunted. In addition, 11% of children under 5 years old suffer from wasting, and 29% are underweight. Moreover, a scarcity of toilets and poor sanitation is associated with high levels of morbidity linked to diarrhea and gastrointestinal disease (USAID, 2013). Notably, women and children are more vulnerable to these problems. Given that children's health issues can influence a country's development progress to some extent, they merit attention.

The results of a survey of 4,500 Nepalese individuals conducted by the British Broadcasting Corporation in 2008 suggest that nearly 90% of the Nepali population listen to the radio program in general regularly. The results of a second survey conducted by the UNDP in three rural regions in Nepal further revealed that 72% of households possessed radios and approximately 50% of households had televisions, indicating that radio is still a major media resource in Nepal's villages. Nevertheless, communities living in mountainous areas have little access to advanced media technology and social media because of geographical and economic constraints. Radio is thus currently the most popular media in the country. In addition, the UNDP survey results indicated that about 90% of respondents viewed media organizations as the most trustworthy organizations in Nepal.

Suaahara is a five-year USAID-funded community-based project implemented in 20 districts with the aim of improving the health and nutrition of pregnant and lactating women and addressing nutritional deficiencies in children under two years old. The project seeks to provide better maternal, newborn, child health (MNCH), reproductive health, and family planning services. Other project goals include improving water and sanitation and hygiene. Patrick Webb, a global nutrition expert, considers this project to be the

most cutting-edge nutrition-focused project at the global level (USAID, 2013). The Suaahara Project is being implemented by seven organizations: Save the Children, JHCCP, Helen Keller International, Nutrition Promotion and Consultancy Services, Nepali Technical Assistance Group, JHPIEGO, and Nepal Water for Health.

The radio program, *Bhanchhin Aama*, is the communication component within the Suaahara Project, aimed at changing social behavior. It can be viewed as an integrated platform that deploys mass media to provide “1,000-day mothers” with knowledge, instruments, and support relating to nutrition and hygiene behaviors (USAID, 2013). The program, which was created by the JHCCP, comprises two parts: the *Bhanchhin Aama* radio drama and the *Hello! Bhanchhin Aama* live call-in radio program (USAID, 2013). The radio program serves as a vital communication strategy for generating discussions within communities and inducing changes in social behavior. It is therefore exemplary for illustrating how mass media brings about social change in developing countries.

4.2 Objectives

According to a report published by JHCCP, *Bhanchhin Aama* has two main objectives. The first is to improve the audience’s awareness and knowledge about appropriate nutrition behaviors as well as maternal and children health (2014). This objective stems from the realization that mass media plays a significant role in transforming knowledge and correcting individuals’ misconceptions. Through analyzing media coverage in Nepal, it indicates that radio is considered an ideal way to expand knowledge dissemination. Popularization of related knowledge can be seen as the most important part of a project aimed at promoting health. It is fair to say that most parts of Nepal are characterized by a closed and traditional society, and individuals’ understanding of relevant knowledge is still relatively backward. Using a combined entertainment and education strategy, both the radio drama and the live call-in program enable knowledge acquisition and behavior correction. The second objective of the radio program is to stimulate discussions about issues relating to nutrition and maternal and child health issues at the household and community levels in order to bring about social change. Extensive discussions among listeners are critical for making change. Participation theory in development communication emphasizes the importance of involving individuals in the development process. Discussions on the content of the radio program within families, among friends, and with other listeners can expand the program’s influence, while also enabling listeners to exchange experiences and opinions relating to nutrition and children’s health issues. *Bhanchhin Aama* seeks to provide a platform for the public to express their own views, deepen their understanding, and acquire appropriate knowledge. At the same time, the program draws the public’s attention to those social problems.

4.3 The target audience

According to *Bhanchhin Aama* Radio Program Design Document Phase-III (2015), the radio program’s primary audience comprises “*Golden 1,000-day mothers*” which refers to the duration of time from when a woman becomes pregnant up to her child’s second birthday.

And their family members, including their husbands and mothers-in-law, who also take care of children at home. As the primary caretakers of children under two years, these women are evidently the key targets for meeting the program’s goal of improving nutrition. The mothers’ behavior plays a decisive role in improving children’s nutrition status, which is seen as a significant part of behavioral change. An infant’s initial nutritional status can significantly influence their future health, implying that the knowledge and behavior of 1,000-day mothers relating to nutrition is critical. Consequently, pregnant women and new inexperienced mothers, who are eager to advance their knowledge to improve their children’s health and the sanitary conditions in their homes, are the primary intended audience.

The program also targets the women’s husbands and mothers-in-law. Save the Children (2015) provided the following example. Bhumi Raj, a young father with an 11-month-old baby, said that he was encouraged to stay with his 1,000-day wife rather than go abroad for work. He also expressed the positive impact of *Bhanchhin Aama* in clarifying the father’s role in supporting his wife. The father’s involvement is recognized as an essential factor contributing to behavioral changes, which can greatly facilitate children’s growth and the family-building process. In addition, the mother-in-law plays a vital role in household decision making, which “*can be the catalyst to act as the tipping point source to change social norms on*

1,000 days women and child care”. Through exposure to *Bhanchhin Aama*, many of the traditional views of mothers-in-law can be transformed, which significantly contributes to changing relevant behaviors.

ther family members, neighbors, and traditional healers constitute a secondary audience of the radio program, while members of mothers’ groups, citizen awareness groups, and students constitute a tertiary audience (*Bhanchhin Aama* Radio Program Design Document Phase-III, 2015). During the process of change in social behaviors, it is important to involve the entire community in activities, as a shift in their consciousness will more or less influence the mothers’ behavior. Furthermore, the popularization of information on nutrition, sanitation, and homestead food production across various social sectors contributes to the sustainability of social change.

4.4 Strategy

4.4.1 Overview of Bhanchhin Aama: The radio program is divided into two parts: a 30-minute radio magazine, *Bhanchhin Aama*, and *Hello Bhanchhin Aama*, a 30-minute live call-in feedback program. The program is aired in three languages through Radio Nepal and other local FM radio stations across 41 districts. The radio magazine broadcasts on Saturdays at 9:20 AM, while and the live call-in program broadcasts on Wednesdays at 6:10 PM (USAID, 2014). The *Bhanchhin Aama* radio magazine can be described as a “*variety show*,” entailing many appealing components, such as radio drama, music, interviews, and a quiz. *Hello Bhanchhin Aama* is hosted by radio announcers and a *Suaahara* specialist. The program mainly focuses on providing answers to questions and comments raised by the audience. The live call-in program provides ample opportunities for new mothers to gain knowledge from experienced mothers and experts. According to Save the Children (2015), 3,000 calls, on average, can be received during each *Bhanchhin Aama* live call-in program, indicating that a large number of mothers ask for advice on family and nutrition issues during the call-in program.

4.4.2 Application of a combined entertainment and education strategy in the Bhanchhin Aama radio magazine program: According to Brown & Singhal (1999), a combined entertainment and education strategy entails an intentional hybrid of educative information incorporated into entertainment patterns aimed at transforming audiences’ attitudes and behavior. This strategy draws on social cognitive theory (Bandura, 1977), which assumes that individuals can study and simulate ideal behaviors demonstrated by role models and thus gains a sense of self-efficacy. Several previous studies, found that a combined entertainment–education strategy can have a significant effect on health behaviors (Brown & Cody, 1991; Piotrow et al., 1997; Singhal & Rogers, 1989, Brown & Singhal, 1999). However, Yoder et al. (1996) found that a combined entertainment–education strategy has relatively little influence on health behaviors.

The *Bhanchhin Aama* radio magazine is divided into a 15-minute drama component and a 15-minute interaction component. The content of the drama focuses primarily on important information about nutrition, sanitation, homestead food production, and the care of sick children. In this radio drama, *Aama* serves as a role model to make people think more deeply about their own living situation and behavior, which is a major aspect of the process of social change. The use of an entertainment–education strategy marks a change from the previous mode of message delivery via mass media, aimed at instilling knowledge into people. In this radio drama, the educational information is conveyed in stories revolving around *Aama*. The radio drama retains its appeal through the plot and the character, forging a strong sense of identity with the role of *Aama* within the audience. People are thus willing to listen to the radio drama each week, following the development of the plot.

The *Bhanchhin Aama* radio drama has strong local characteristics, and its content closely emulates the local society, thus enhancing its feasibility and accessibility. Because the life backgrounds of members of the audience are in alignment with those of the characters in the storyline, they have plenty of opportunities to compare their own behavior with the characters’ behavior. Consequently, it is likely that they will observe and imitate the model behavior. In this way, the radio drama exerts an imperceptible impact on the target audiences. This type of radio program can be considered an improved mode of communication for development. The combined entertainment–education strategy brings about social change in the community in two ways. First, it affects listeners’ consciousness and behavior regarding a social issue. Second, it fosters social advancement through changes in the audience’s external circumstances

and through the creation of necessary conditions and a conducive environment at the community level (Brown & Singhal, 1999).

4.4.3 Live call-in Hello Bhanchhin Aama program: Hello Bhanchhin Aama is a significant component of the Bhanchhin Aama radio program. The 30-minute call-in program elicits audience feedback on the 30-minute radio magazine. The main program content comprises the announcement of quiz winners and responses to questions, comments, and stories sent in via SMS (Bhanchhin Aama Radio Program Design Document Phase-III, 2015). According to USAID (2015), the phone-in program was designed on the basis of the Bhanchhin Aama drama and is hosted by trusted radio announcers, experienced mothers, and experts. The program can serve as a tool for deepening the understanding of the audience regarding relevant issues. Which were raised in the previous week's radio magazine program, while also encouraging them to consider their own problem behaviors further? During the development process, not only knowledge transformation but also the audience's questions and feedback require attention and responses achieved through two-way communication with the target audience.

According to a publication of the Human Science Research Council titled "*The People's Voice*" (Hadland & Thorne, 2004), community participation in development communication projects should not be designed as separate events; rather, a process should be implemented that encourages everyone to participate in the project to discuss an idea that can bring about benefits and development for them and for the entire community. In this live call-in program, the audience can communicate with the host and experts via phone calls or messages, posing questions pertaining to their lives. These questions are then answered by experienced mothers and specialists on the radio, thereby enabling a wider dissemination of typical questions and answers and promoting the effect of the radio program in bringing about social change in the community. This communication process provides opportunities for listeners to address critical issues in their lives and to participate in the developmental process. The interaction between the radio program and community members should be continuous, so that the program specifically addresses the needs and concerns of people within the community (Olorunnisola, 2000). This type of radio program needs to utilize communication techniques to encourage more people to participate in the program, exchange ideas, and pose questions to the host and experts, which can contribute to the radio program effectively fulfilling its purpose.

4.5 Evaluation of the effects of communication

It is particularly important to analyze the communication impacts of the program in recent years, which can reveal whether the program achieved its original objectives. More generally, an evaluation of whether the strategies used in the program have induced changes in behavior at the community level and how these changes have been accomplished is essential. A large amount of data was obtained from the JHCCP to evaluate the communication impact of the program. In addition, feedback from the audience was provided by Save the Children and USAID and the in-depth interview transcripts and listeners of the program were also analyzed as evidence of its effectiveness.

According to the results of a survey conducted by Suaahara in 2014 to track nutritional outcomes in the 20 districts of its operations, about 50% of the population with radios listens to *Bhanchhin Aama*. Moreover, 28% of the overall population in the 20 districts has listened to the program (Save the Children, 2015). In development communication projects, the scale of the target audience can largely determine the impact of communication. According to the survey results, half of the surveyed families with radio devices, which is a very high proportion, have listened to this program, which is indicative of its popularity. Importantly, a wide-ranging audience is the basis of the premise of the program's subsequent effects and is also a significant indicator for measuring the impact of the communication strategies. One of the objectives of the radio program is to correct nutrition-related behaviors and to improve maternal and child health. According to the results of the above-mentioned survey, 81.7% of respondents took the right actions relating to infant feeding after listening to the program (Save the Children, 2015). This percentage indicates that the program content has considerably influenced behavioral changes within communities, thus fulfilling a significant program goal to some extent. Evidently, *Bhanchhin Aama*, a radio program that seeks to bring about behavioral changes in Nepal has been effective. Its unique format has enhanced its competitiveness, leading to a very high listening rate. Nevertheless, it is not enough to evaluate the communication impact

solely by the extent of the audience. The program deploys a strategy in which educational information is combined with a form of drama (entertainment), which encourages the audience to rethink its own behavior and to emulate the correct behavior demonstrated by the role model. Out of every five persons, four are reported to take appropriate action after listening to the radio program, which is a highly significant outcome, contributing to behavioral changes and improved nutrition at the community level.

Rachana Shrestha, who is the social mobilization and communication coordinator of the *Bhanchhin Aama* program and one of the interviewees, made the following statement:

Both [the] drama and live call-in radio programs are equally effective and needed in [the] community, as drama gives information and knowledge to people and live call-in radio makes [things] clear [for] them [regarding] their queries [on topics] like their health and nutrition-related problems. Many of 1,000-days mothers' problems have been addressed through the live call-in radio program.

She strongly affirmed the impact of these two forms of radio programs on maternal and child health in Nepal: "*We see changes in hand-washing practices, family support, food diversification, ANC check-ups during pregnancy, and extra meals for pregnant women and lactating mothers.*" She also mentioned that she had helped other 1,000-day mothers to call in to the live call-in radio program, and that they were satisfied, having received the desired information.

Changes in social behavior are the most significant factor to be considered when assessing the effectiveness of a development communication program. The ultimate goal when designing the program's format and content is to bring about behavioral changes within the community. The drama-based radio program, *Bhanchhin Aama*, effectively transforms educational messages through the creation of a "*spokesperson*," Aama, who is a forward-thinking mother-in-law. A wide range of the audience members, who are attracted by the storyline and influenced by Aama's living behavior, have begun spontaneously to change their inappropriate behavior to improve the health and environment of their families. In addition to these survey results, there are numerous examples confirming the significant role of the program in changing the behavior of the target audience.

In an article titled "Radio Program Shares Critical Nutrition Messages in Nepal," published on their website in 2014, the JHCCP has provided some of these examples. For instance, Tulasha Shrestha of Bhojpur-5 District stated that the *Bhanchhin Aama* program was not only of considerable help to her but it also affected the health of her children. She fed her fourth child exclusively with breast milk and he is very healthy. In her view, it was easier for her to give birth to this child than to her previous children. Bhola Hamal, another listener from Okhle District, said that *Bhanchhin Aama* has raised her awareness of sanitation and hygiene. She constructed a chicken coop using bamboo after listening to *Bhanchhin Aama* in order to keep the chickens away from her living area.

Another 24-year-old audience member, Sobita Karki, from the Baglung Hills stated that she learned the importance of communicating with her husband by listening to the radio program. She also mentioned her experience of participating in the program, noting that she had shared her experience on the radio program with a mother who was having difficulty feeding eggs to her child, encouraging her to continue trying. The radio program also helped her a lot, giving her confidence in her own maternal expertise. She talked about being inspired to take good care of her kitchen garden and to plant a range of vegetables by mothers on the program.

According to Pabita Yadav, the call-in program makes people aware of the significance of participating in the development process; a statement which reflects the transformation of the development communication paradigm from being top-down to becoming bottom-up. It is noteworthy that mass media is no longer just a tool used by some organizations to promote and disseminate their ideas; it also provides a platform for people to participate in development projects. This shift in the function of the mass media ensures two-way communication of the audience and some experts, which also provides ample opportunities for local people to help other members of their communities to make the right decisions.

Furthermore, one of the objectives of the radio program is to stimulate discussions about nutrition and maternal and child health issues at the household and community levels to bring about social change. The result of the survey conducted by Suaahara revealed that 53.3% of listeners discussed the content of the

program with their friends and families. It is fair to say that the program content effectively generates community-based discussions about various key issues, which is one of the aims of the program. Extensive discussions within the community are meaningful for those mothers who do not listen to the program because they can learn new knowledge and appropriate behaviors from those mothers who regularly listen to the program. The topics of discussion among community members are not limited to the program content and may also include their daily life experiences. Through the sharing of experiences and knowledge with family and friends, the audience has a sense of participation and a feeling that they can control and improve their behavior, which is essential goal for the process of development communication. The survey results also indicate the importance of mass media in stimulating public discussions and their enormous significance in people's daily lives, thereby challenging the notion that only grassroots media can effectively give voice to opinions and enable the attainment of development goals.

Carol Underwood, a senior research adviser at the JHCCP, made the following statement: Process evaluation data suggest that recall of *Bhanchhin Aama* is positively and significantly associated with nutrition-related knowledge. In addition, an independent cross-sectional survey of 2,500 mothers in four districts found that child dietary diversity, consumption of food from four or more food groups, consumption of fruits and vegetables, and consumption of animal source foods were positively and significantly associated with the frequency of listening to *Bhanchhin Aama*.

An analysis of the information provided by her revealed that the latest survey results confirm that the positive influence of *Bhanchhin Aama* is widespread in Nepal.

It is vital to assess whether the behavioral transformation brought about by the *Bhanchhin Aama* radio program is sustainable. The communication methods and program content need to frame in ways that ensure that this program's impacts on behavioral changes within local communities are widespread and enduring. Dharama Raj Bajracharya, a senior Social and Behavior Change Communication (SBCC) program officer within the Suaahara Project, had a positive view on this issue.

It is because the popular weekly *Bhanchhin Aama* drama magazine and *Hello Bhanchhin Aama* phone-in radio programs continue to be central components of the *Bhanchhin Aama* campaign. Both radio programs are aired by 60 local FM stations in 25 Suaahara districts as well as nationally over Radio Nepal. The combined radio program is a platform for participatory and interactive discussions at the community and household levels to facilitate and sustain behavior [a] change for integrated nutrition (-related) actions.

5. DISCUSSION

5.1 Deployment of a combined entertainment–education strategy

A combined entertainment–education strategy has been extensively used in mass media campaigns to improve the outcomes of development projects. According to the Kaiser Family Foundation (2004), this strategy is aimed at integrating educational information with entertainment media to influence the public's behavior, awareness, and knowledge. Some scholars have proposed that combining entertainment and education can be seen as a more effective method than conventional persuasive information because of its resistance-reducing potential (Slater & Rouner, 2002). Social cognitive theory, which is widely applied in the field of education-based entertainment, posits that people acquire knowledge and skills vicariously by observing and imitating the behaviors of role models. These models, portrayed in radio or television dramas, deliver sound knowledge, ideas, and demonstrations of ideal behavior to the audiences. An evidence-based analysis was conducted of the combined entertainment–education radio program, *Bhanchhin Aama*, in which Aama serves as the role model and “spokesperson” in the *Bhanchhin Aama* radio program. She is a forward-thinking mother-in-law who promotes appropriate nutrition and sanitation behaviors. The first phase of *Bhanchhin Aama* was an enormous success, eliciting a wide range of responses from the audience. The program's success suggests that Nepal could adapt the combined entertainment–education strategy to satisfy its specific development needs, which also indicates the significant role of mass media in transmitting knowledge. This strategy can provide advantages not only for the audience but also for governmental development officials, broadcasting networks, and commercial sponsors if implemented appropriately. It is noteworthy that the educational programs are generally not popular and require large investments, whereas entertainment programs usually get high ratings. The combined entertainment–education strategy can be

regarded as an effective method for simultaneously addressing commercial and social interests (Brown & Cody, 1991).

There are several challenges entailed in the entertainment–education approach, one of the main ones being how to promote innovative content and form adapted to the local cultural context. According to Singhal & Rogers (2002), the combined entertainment–education strategy needs to be expressed more creatively through the deployment, for example, of crafts, art, toys, and murals rather than being limited solely to modes of mass communication (television, radio, films, and print). A notable example of an innovative initiative is “*positive pottery*” made by HIV-positive individuals in South Africa, which are embellished with etched traditional African motifs and ribbons symbolizing AIDS.

A second challenge that has increasingly attracted scholars’ attention entails evaluating the extent to which audiences are exposed to the entertainment–education product to assess the direct and indirect influence of this strategy. The current evaluation method mainly relies on audience surveys, which is insufficient for a deeper analysis of the effect of entertainment–education products on individuals’ behavior. A method that can comprehensively and objectively gauge audience acceptance of this strategy can be of significant value in helping organizations to improve their program content and achieve their intended targets. Thus, it is essential to establish a more refined and scientific evaluation system.

5.2 Generating interpersonal communication

Mass media plays a significant role in generating interpersonal communication, which is evidently an important factor driving behavioral changes. According to the diffusion-of-innovations model within development communication theory, mass media and interpersonal communication have different functions. Mass media is considered useful for generating innovative consciousness. By contrast, interpersonal communication is effective in prompting adoption (Lin & Burt, 1975; Valente, 1993). Mass media plays a major role in stimulating casual and efficient interpersonal communication.

At the same time, mass media has expanded the scope of interpersonal communication, which has had a positive and transformative influence in driving the change toward appropriate behaviors in developing countries. It is essential to abandon the top-down paradigm in development communication theory. Interpersonal communication sparked by mass media leads to instant and direct information feedback from audiences and the timely advancement of people’s development needs. In addition to its use in promoting an educational approach to raise individuals’ awareness, mass media can be used to foster interpersonal communication, thereby promoting social change on a more equal and relaxing footing.

This analysis of the *Bhanchhin Aama* radio program has shown that the target audience is not passive spectators of the live call-in program; rather, they participate directly in the radio program. They are able to engage with the program by raising questions or providing solutions for others’ problems via telephone and text. The openness and instantaneity of the call-in program provides a convenient and extensive communication channel for both information transmitters and receivers, restoring mass communication to the natural state of life. Moreover, the high proportion of the audience engaged in discussions of the issues raised during the program with their friends and families indicates the considerable concern prompted by the program. Notably, a deeper understanding of many of these issues develops during wider discussions. The promotion of interpersonal communication effectively meets the emotional needs of the audience, which also has a significant impact on behavioral changes. For example, an interview held with Dharma Raj Bajracharya revealed that the two-way interaction fostered by the radio program can enhance the effect of communication, which can consequently induce behavioral changes that can affect several generations. Dharma further observed that radio programs can stimulate discussions, leading to changes even among people who have not listened to the entertainment–education program directly but have discussed the program content with family members, friends, or neighbors.

To generate more effective and wider interpersonal communication, development communication practitioners need to explore this from a more comprehensive perspective attending to the following considerations. First, the use of radio as an effective media for generating interpersonal communication within many development communication programs is widely acknowledged. Broadcasting is the expansion of interpersonal communication with the aid of modern technology. In many underdeveloped areas, radio is

regarded as the most important means of transmitting information. The live call-in model can be seen as an interpersonal exploration, which has been largely neglected in mass communication initiatives. Consequently, the question of how radio can be used and the form of the interaction between the host and the public for maximizing the effects of interpersonal communication induced by mass media is a significant issue for scholars and practitioners. Moreover, media content should include more personal attitudes and emotions as opposed to only transmitting knowledge. The content of the programs is intended to be personified, which should forge emotional bonds and generate interpersonal communication.

Second, the adaptation of the concept of opinion leaders is considered an important part of engaging social networks in development programs (Kelly et al., 1992). Some people prefer to discuss program content with opinion leaders rather than with their friends, and some individuals may discuss relevant topics more actively than others. Therefore, opinion leaders serve as essential “*network hubs*” at the community level (Kelly et al., 1992).

Third, one of the key objectives of many media campaigns is to improve individuals’ conversational skills, indicating the importance of teaching people how to discuss sensitive topics with their family members and friends. For instance, one of the strategies utilized by the U.S Office of National Drug Control Policy in a national media campaign in the late 1990s and early 2000s was to stimulate discussions between parents and children about drugs (Hornik et al., 2000). Many organizations are making efforts to encourage people to pay more attention to sharing their own views and information on sensitive subjects within their families and with close friends.

5.3 Building sustainable capacity

As the power dynamics between mass media and the audience become more equal, people can increasingly express themselves more clearly, giving voice to their own difficulties and developmental needs. According to Fang (2002), the benefits derived from information are not in perpetuity, but the transitioning of ideas entails a long-term process. The emphasis on participatory theory within mass media is beneficial for the cultivation of public consciousness. Self-management is considered the key elements of participatory communication (Servaes, 2007). However, the practice of participatory communication is still restricted and undermined by various power-related factors in many Third World countries.

6. CONCLUSION

In contemporary development communication projects, the role of mass media is gradually changing. In many cases, attention has focused on how to involve community members in discussions about the content of the programs via mass media. As an interactive platform, mass media not only prompts behavioral change but it also fosters attitudinal changes, which play a significant role in building individuals’ sustainable capacities. Furthermore, it is essential for organizations implementing development communication to realize the significance of engaging local people in the design and implementation of media campaigns. However, there are many challenges entailed in realizing this objective. It is vital for local people to assume the role of active participants in the decision-making process rather than simply receiving messages. Accordingly, they need to be given more rights relating to the utilization and distribution of media resources to achieve self-efficacy and ensure that their capacities built up through development projects are sustained.

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