Abstract  In order to understand the communication strategy adopted by the Ministry of Health to prevent diseases caused by Aedes and to analyze the perception of the community regarding the videos on dengue, chikungunya and Zika aired between 2014 and 2017, a qualitative analysis was performed based on an in-depth interview with a key informant from the Ministry of Health Communication Center and conversation circles with the community in four Brazilian regions. The strategy adopted by the Ministry relies on the Hypodermic Needle Theory due to financial and logistical issues, but the analyzed campaigns did not reach the majority of participants in the circles. The latter consider that the most important information in prevention campaigns is related to care and not possible sequelae, different from what was affirmed by the key informant. The community considers the regionalization and the approach of socio-environmental, cultural and economic characteristics to be important, but the Ministry of Health does not consider the regionalization of campaigns to be effective. It is concluded that the videos do not meet the needs of the population and should be used in an integrated manner with other types of information, education and communication actions in health for effective disease control.

Key words  Disease prevention, Aedes, Health communication, Qualitative research
Establishing the contexts

Communication and health have shown a proximity since 1920, a time when the dominant health model had advertisement and health education as strategies to cope with diseases in Brazil and worldwide. The Ministry of Health (MH) has historically and traditionally carried out public communication campaigns in Brazil and, with the emergence of chikungunya fever in 2014, and the Zika virus and its association with the increase in cases of microcephaly in babies whose mothers were infected in 2015, there was a significant increase in television ads against the vector of these arbovirus diseases. That occurred because in view of the triple disease burden – dengue, chikungunya and Zika –, the great challenge for government officials was to implement effective prevention actions, as well as inform the population about the risks and the importance of their collaboration aiming to control the vectors of these arbovirus diseases.

Used for a long time as instruments to fight endemic diseases, television health campaigns are based on one of the first theories of mass communication, the Hypodermic Needle Theory. This is part of the studies called 'Mass Research Communication', carried out initially between 1920 and 1940, based on psychological, sociological and anthropological paradigms. The main objective of these studies was to investigate the effects of exposure to mass communication media on people's perception and behavior, as well as their impact on culture, and forms of social, political and economic organization.

There are disagreements regarding the role of campaigns in public health. There is no denying the strategic role, nor the potential they have; however, there are studies that demonstrate how limited they are, mainly for the transformation of attitudes, social practices and ideologies. In general, campaigns favor informative ads to prevent diseases and the divergences are not surprising, as the perspectives of management and the population are observed in their respective political and social contexts.

Based on authors dedicated to the methodology and the topic used in this study, the result of a Master's Degree research, health communication can be defined as a field of studies that refers to dialogical processes and the use of communication strategies, which must respect the rights to information, education and health. Its purposes include the prevention of diseases, the encouragement to citizenship through social participation, transparency in management, as well as the promotion of quality of life improvement of people in different social contexts, through interpersonal relationships, the media and knowledge.

As health surveillance and campaigns take place in the public sphere, a concept that supports the discussions in this investigation is that of public communication. Bucci states that the latter consists of informative actions and dialogues, opinion polls, put into practice with public resources and based on transparent and inclusive decisions. Additionally, the author states that these actions must be open to inspection, by both society and the government control bodies, especially to the criticisms and appeals of organized civil society. Regarding the public communication function, Bucci points out that it “exists to promote the common good and the public interest”.

The concept adopted for the communication of risks is that of the communication working group of the International Health Regulations (IHR) of the World Health Organization (WHO), which points out 'Communication of Risks' as a process of exchange of information in real time, advice and opinions between experts or civil servants and people whose survival, health or economic or social well-being are under threat. The purpose of this communication is to collaborate so that people at risk are able to make informed decisions to reduce the effects of the threat, as well as adopt appropriate measures to prepare themselves, seeking positive behavior changes and maintaining the trust.

The results presented here originate from an investigation included in the ArboControl Project, funded by the Ministry of Health, and carried out in partnership with Universidade de Brasília (UnB), within the scope of the Health Education, Information and Communication Laboratory (LabECos, Laboratório de Educação, Informação e Comunicação em Saúde) and of the Center for Studies in Public Health (Nesp, Núcleo de Estudos em Saúde Pública) at UnB. It is part of the subproject “Information, education and communication management in the control of dengue, Zika and chikungunya arbovirus diseases”, of which objectives include to learn the activities and practices carried out in relation to the aforementioned health communication actions.

Based on the fundamental project, we seek to understand the communication strategy used by the Ministry of Health to prevent diseases caused by Aedes. Moreover, it aims to analyze the community’s perception of campaigns on dengue, chikungunya and Zika arbovirus diseases run by the Ministry of Health from 2014 to 2017. The perception analysis is based on reports ori-
originated in conversation circles with citizens from the municipalities of Vilhena, state of Rondônia; João Pessoa, state of Paraíba; Anápolis, state of Goiás; and Cascavel, state of Paraná, located in the North, Northeast, Midwest and South regions of Brazil, respectively.

Methods

The methodological paradigm of this study report is the comprehensive-interpretive one. For Minayo et al., this theory answers qualitative questions and places at the center the understanding of human reality lived socially. Its theoretical and methodological bases were developed by Max Weber and the landmark for this tendency was its definition of Sociology. Therefore, it investigates the human expressions present in relationships, subjects and representations. It also refers to people’s lives and deals with “[...] the universe of meanings, motives, aspirations, beliefs, values and attitudes, which corresponds to a deeper space of relationships, processes and phenomena that cannot be reduced to the operationalization of variables”, as well as “[...] expands into the world of the meanings of human actions and relations”.

Due to its applied nature, this study sought to produce knowledge aimed at the health communication management and the use of audiovisual materials for the prevention and control of dengue, chikungunya and Zika arbovirus diseases. The course adopted in the investigative process gave relevance to the thought that “provides the bases for a dynamic and totalizing interpretation of reality, as it establishes that social facts cannot be understood when considered in isolation, abstracted from their political, economic, cultural influences”.

The methodological choice was made due to the complexity of the phenomenon, as it addresses a public health problem for which a change in habits is crucial for its resolution. It is a study that involves descriptive objectives about people’s understanding and assessment in relation to the campaigns. Therefore, it is essential to consider the actors’ subjectivities and realities on which the problem develops. For this purpose, it articulates the techniques and procedures of bibliographic, documentary and observational research, since the research team had a direct participation, together with the population of the municipalities they visited, aiming to obtain information about their perceptions regarding the campaigns, prevention and control actions against arbovirus diseases.

Data collection

The in-depth interview was the technique used to collect information from the key informant of the Ministry of Health Communication Department coordination. The interview was requested via the institutional email – available on the Ministry of Health website – after the analysis of prevention campaigns against arbovirus diseases and observation of gaps identified in a previous study, gaps that could only be clarified by those responsible for creating the campaign pieces. From the aforementioned analysis, the script was also created with guiding questions for conducting the interview, which lasted two hours. The audio of the conversation was recorded, transcribed and encoded with the acronym “IC”, meaning ‘key informant’ in Portuguese (informante-chave).

The conversation circle was the second data collection technique used in the study. It consists in a “method of collective participation in the debate about a specific topic, from which it is possible to dialogue with the subjects, who express themselves and listen to their peers and themselves through a reflective exercise”. Two pilot meetings were carried out to set the script for the conversation circles in the municipalities of Brasília-DF and Luziânia-GO.

For this analysis, four activities were investigated, carried out in Vilhena-RO; João Pessoa-PB; Anápolis-GO; and, Cascavel-PA, which were coded as “RCV”, “RCJ”, “RCA” and “RCC”, respectively. In the acronyms, “R” means “circle” (roda, in Portuguese) and the other letters correspond to the initials of the municipalities where the respective conversation circles took place. The investigated municipalities were included according to the ArboControl Project criteria, into which this analysis is integrated.

The following issues were considered: urban location according to the Classification and Characterization of Rural and Urban Spaces in Brazil; participation of the respective municipalities in the Rapid Survey of Indexes for Aedes aegypti (LIRAa) in the years 2016 and 2017; and adherence by the municipality to the Health at School Program (PSE, Programa Saúde na Escola). The field articulation was made in advance, through telephone calls and support from Health and Education Secretariats, as well as community leaders or other actors who were strategic to the social mobilization of these participants. Thus, the researchers’ visit to the municipality was scheduled, according to the collaborators’ availability to receive the team and observation of municipal holidays, among other impediments.
At the time, the participants invited to the conversation circles met the researchers at the location provided by the municipality. These varied from classrooms, gyms, health unit auditoriums and other spaces.

Each conversation circle included ten individuals and lasted 1 hour and 30 minutes. All participants were over 18 years of age; of both genders; being the head of the household and residents of the visited municipalities. Most participants were black women, aged between 42 and 66 years old, and had not finished Elementary School. Health counselors, teachers and health professionals were excluded, as the pilot meetings showed that such actors monopolized the dialogues, influencing or silencing the other participants. The conversation circle included presentation activities; non-specific and specific warm-up activities; development – the moment when the films of the campaigns about arbovirus diseases were shown as stimulating elements of the dialogue with the participants – and, comments for finalization

The data were collected from April to June 2018. In addition to questions about perceptions regarding the videos themselves, the activity covered subjects on education, information and communication practices in health of the daily life of the participants observed in the campaigns and in the review of the relevant literature. The fieldwork was carried out by trios consisting of researchers and doctoral, master’s and/or scientific initiation students from the areas of Collective Health, Psychology, Medicine or Pharmacology. The dialogues were recorded, transcribed and categorized based on thematic questions. Moreover, the researchers adopted the field diary to heighten their understanding of the visited scenarios.

As established by Resolution N. 466, of December 12, 2012, of the National Health Council, the study followed the ethical aspects related to research with human beings. It was submitted to the Human Research Ethics Committee of Faculdade de Ciências da Saúde of UnB and approved on April 20, 2018. During its performance, the participants were informed about the research objectives and only became study participants after they were clarified about the Free and Informed Consent Form (FICF), which they signed and of which they received a copy, handed by the researchers.

Data analysis and interpretation

The analytical strategy used in the investigation was Bardin’s content analysis technique. The technique explores the field of communications and its meanings and discloses elements underlined in explicit contents beyond the appearance and functional objectives of what is communicated in campaigns. The results of the interviews and conversation circles were analyzed and discussed in the light of the relevant literature.

For this particular report, some issues were observed from the creation of the audiovisual campaigns – particularly regarding the interview with the key informant and with the community, topics related to the videos presented in the conversation circles. These addressed the three arbovirus diseases in campaigns that circulated in different periods. The films were collected from the Ministry of Health portal and grouped into two blocks, one on prevention, guidance and care, and the other on real characters, with reports on the consequences of infection by the diseases.

The perceptions and responses of the in-depth interview and conversation circles were grouped into five thematic categories, namely: 1) audiences; 2) objectives, aesthetics and information; 3) representativeness and identification; 4) care, which included the subcategories facilities, difficulties and others; and 5) quality of the campaigns.

Results and discussion

For the first category, we considered the participants’ answers about whether or not they watched the films and, in which media, in case of positive answers. The theoretical and conceptual aspects of this category involve studies of Mass Communication Research and Contemporary Latin American Thought on reception and mediation.

In the second category, perceptions about the understanding of the campaign objectives were included, for instance, whether they were informative, sensationalist, about risk communication, among others related to the prevention and control of arbovirus diseases. In terms of sensationalism, we considered the definition that states that “it is the use and effect of sensationalist subjects, aiming to cause an impact and shock the public opinion”. This is a current mode of discursive production of information, triggered by “criteria of intensification and graphic, thematic, linguistic and semantic exaggeration, containing in itself disproportionate values and elements, highlighted, added or subtracted in the context of representation and construction of the real social.”

The third category, in turn, included topics about the recognition of the respective cultu-
ral, social, economic, and geographical realities, among other aspects portrayed in the videos. The support for this category comes from social and environmental determinants in health.26

Regarding ‘care’, the fourth category considered the participants’ actions aimed at the prevention and control of arbovirus diseases. These were divided into the subcategories: care facilities, care difficulties and other types of care. The first one included responses and topics that facilitate actions; the second, those that made it difficult; and, in the third, other types of care, not highlighted in the campaigns. In this perspective, care is understood as a “[...] ‘a way of doing in everyday life’ that is characterized by ‘attention’, ‘responsibility’, ‘concern’ and ‘care’ ‘towards people and things’ in different places and at different times of its achievement”27.

Finally, the fifth category encompasses aspects about the quality of the campaigns, especially regarding the fulfillment of their objective, language, location and plot employed, as well as their content. For that purpose, the participants’ perceptions and evaluations were interpreted from the perspective of Public Communication and based on the statements by Zémor, translated and commented by Brandão:28 “Listening to the user means having the capacity to give a non-stereotyped answer, taking into consideration the user and the precise content of the problem he is reporting” and “While the users respect and submit to the authority of public institutions, they protest about the lack of information, or about their poorly constructed, incomplete or poorly publicized messages”28.

The results demonstrate that television is no longer decisive in boosting the audience for public health campaigns. In João Pessoa-PB, only three participants declared they had seen the videos. Vilhena-RO was the place where most people saw the ads, followed by Anápolis-GO. The other participants of the conversation circles did not remember seeing them or simply did not watch them, even though they are seasonal actions and stay on the air for at least four months.

The interview confirmed that the main communication strategy of the MH is based on the Theory of the Magic Bullet:

My objective, and I have to be very clear about it when I work in the Federal Government, I have to reach as many people as possible using the same message. (IC)

To achieve this goal, they invest most of their resources in the dissemination of campaigns on broadcast TV, although they know that this action no longer has the expected effectiveness:

The TV has lost a lot of space and the communication and media surveys indicate that fact. It is no longer 100%, as it used to be [...] it remains the space with the most credibility. (IC)

The findings of the conversation circles demonstrate the flaws of this strategy. The MH still treats reception as a mere stage in the verticalized and institutional communication process it practices, while what we have today is, in fact, a less controlled audience, endowed with access to alternative media, which produces and chooses what it wants to consume from communication in the presence of access expansion, especially the one gained via the internet.29,30

Regarding the objectives, aesthetics and information, people demonstrated that it is clear that the messages aim to promote the prevention and provide guidance on care and actions to eliminate mosquito breeding sites, as well as the capacity to identify the stories of real characters. It is noteworthy that the aesthetics of the films is not directly mentioned, but the way people observe it can be noticed through the words used to describe them, in a paradox between prevention/care versus loss/suffering.

The somber ads talk about losses and sequelae, with a dramatic soundtrack in the background, and demonstrate the use of a more sensationalist approach, as the management must show the severity of the problem:

It was intentional, to break that TV advertisement pattern, which is all that beer, all that happiness. Stop. Let us reflect, because it is a suffering for that person, and it is real. They are a real person, it can happen to anyone. (IC)

Some participants mentioned that the campaigns really have to ‘shock’, because ‘unfortunately’ the population is concerned about doing something only if their incentive is fear.

Regarding the representativeness and identification category, the participants of Vilhena-RO and João Pessoa-PB did not comment or respond when asked if they realized that the reality shown in the videos regarding the houses, streets, objects, among other things, looked like theirs or whether they identified themselves with the situation. This was a very revealing silence. In addition to the differences shown in the design of the municipalities and in the answers previously given by the participants of the circles, the descriptions of the researchers’ field diaries disclosed the differences in the realities of the municipalities, as well as between the regions of the country.

The campaigns have little concern for the social determinants of health in the respective regions, especially about the territory and the envi-
The ads show, in their great majority, paved streets; clean spaces; concrete residences; access to garbage collection services, public transportation and drinkable water. This is not the standard picture in the reality of Brazil, especially when analyzed by regions or from basic sanitation data. Data from the Profile of Brazilian Municipalities (Munic.) of 2017 show that only 41.5% of the total of 5,570 Brazilian municipalities had a Municipal Sanitation Plan, with the North and Northeast regions being among those that have fewer municipalities covered by the plan.

Comments from the participants themselves corroborate the relevance of considering social determinants and the strategy of regionalization by pointing out differences ranging from the use of 'concrete slabs' to culture. In addition to the situations on the determinants, the identification could collaborate to increase mobilization, as it is a fact that, when people recognize and see themselves represented, the feeling of co-responsibility and belonging increases. However, the MH maintains the massification of messages:

We try to bring characters that represent the population, because then you represent a little bit of the regionalization, but it is still a mass campaign.

The regionalization in health communication is fragile and the articulation with local managers is flawed, especially with regard to the logistics of communication actions at the federal level, due to deficiencies in the temporal coordination and the logistics of material distribution to states and municipalities, particularly printouts. The insistence on using the 1920 format prevents management from thinking about alternatives and once again demonstrates the need for such actions to be concerned with the reality of the country and to seek effective means to inform and guide about care in the prevention and control of dengue, chikungunya and Zika. Although regionalization is not proving effective for the management, it is necessary, due to the health situation of the population in the different regions of the country, which is seasonally plagued by arbovirus diseases.

Regarding care, people unanimously stated that cleaning up is the easy action, whether at one's own house or utensils such as vases, water tanks or animal water dishes. The cleaning of the rain gutters was pointed out as a difficulty, mainly because to clean it, it is necessary to climb a ladder. A situation discussed in the conversation circles in João Pessoa-PB, Anápolis-GO and Cascavel-PR, is related to the recommendation 'talk to your neighbors', a problematic difficulty, including reports of violence and fear:

You see, I used to enter that farm [...] The day I entered, the security guard said: 'The woman said to shoot whoever enters.'

Other types of care and practices adopted by the participants and not objectively mentioned in the videos presented in the conversation circles were related to insect control methods using bleach, industrialized or natural repellents and insecticides, such as burning orange peel and lavender. Based on the reports, it can be observed that the audiovisual campaigns broadcast nationally have not met the population's need for information and guidance, which, in turn, ends up adopting practices that are even dangerous due to the 'old issues of misinformation'.

However, the Ministry of Health has chosen to no longer address care or share guidelines in the national campaigns:

The people did not want to hear about the mosquito breeding sites anymore, something we talked about for years [...] 'What do you want to hear, then?' 'We want to hear about real people in these campaigns' and then the insight came, we need to tell real stories, because people know what they have to do, but they don't do it.'

In the conversation circles, however, the most important information for the population was about preventive care, recommendations on how to eliminate breeding sites and seek help at the health units in the presence of any disease symptoms. Most people then emphasized care, which directly contradicts the statement by the Ministry of Health.

Finally, regarding the quality of the campaigns, according to the community, it is necessary to go beyond the videos and, when using them, it should be done strategically, integrated with other actions, mainly in more problematic regions – and with the help of the health agents:

I think the campaigns, at least those we have, are satisfactory [...] because I understand that this issue of care is more cultural, it changes a lot from region to region. For instance, we are here in a municipality, in a region where the garbage collection service is satisfactory, where vacant lots are adequately taken care of, but there are municipalities where that does not happen. I think that if you massify instructions and recommendations in general, it is not really the solution, but rather to focalize. The most deficient areas, where people have a culture of being laxer and where the mosquito foci are larger [...] I think they need a bigger investment than us. But in general, it is also necessary, of course.

The need for establishing a dialogue with health professionals to address questions about arbovirus diseases was evident in the statements,
including suggestions on how to approach people. In short, the dialogue is what people most need and miss to take preventive actions and care for their health and that of the community. It is clear that strategic communication efforts cannot go without massive campaigns, but they must rely on targeted actions. “It is essential to ensure, through strong interpersonal communication, that massive messages quickly penetrate the conversation networks in the municipalities, otherwise, the messages themselves tend to disperse and lose strength”33. This is possible in meetings that include listening and exchange, basically done door-to-door, looking into people’s eyes. The campaigns, even when produced and pre-tested in a planned manner, hardly change social behavior in proportion to the investments they demand.

Final considerations

The population understood that the use of mass audiovisual campaigns alone is not enough to mobilize them, inform them and guide them towards prevention and control actions against the *Aedes* mosquito proliferation or the emergence of dengue, chikungunya and Zika virus infections. Although this is the main strategy used by the Ministry of Health, especially when considering the financial investments that are made, in four different regions of the country, the notion of “campaigns” is much broader than the broadcast of 30-second ads on the national TV network. The population’s perception is the same as that of researchers in the area; they must not be discarded, but they need to be rethought, considering the social, economic, cultural and environmental determinants of the different Brazilian regions.

Furthermore, they need to be articulated and integrated with other intrasectoral actions of information, education and communication in health, especially those involving interpersonal communication and social participation. People are asking for regionalized communication actions, based on dialogue and the right to information and communication, in an accessible language that transmits credibility and trust, especially with doctors and nurses responsible for the first care in case of disease. The reports also point out the need for communication in health to be presented transversally and, in this context, be a concern that goes beyond raising awareness through fear and sadness, not only in the approaches to prevent dengue, chikungunya and Zika, but in all others related to individual and collective health care.

The focus on eliminating the disease vector and the silence regarding social and economic factors by the Ministry of Health prioritize prevention based on epidemiological data; however, they do not contribute for people to develop a critical sense of their real needs for comprehensive health care, and even rethink social realities and relationships with the environment as citizens. As pointed out by participants in the conversation circles, greater integration is needed between managers at the federal, state and municipal levels, as well as with sectors other than health care. Another noteworthy fact is the seasonality of the campaigns. Continuous actions must be taken to prevent these arbovirus diseases, not only in the period when there is an epidemic of the diseases. Therefore, focusing on the prevention and health promotion of the individuals before the reemergence of the diseases, is essential in health communication.

Collaborations

AJ Albarado: study conception, data analysis and interpretation, writing and final review of the manuscript. AVM Mendonça: critical review. EA Jesus: study design, data interpretation and final review. MF Sousa: critical review.

References


