

Analysis of the prevention campaigns against dengue, zika and chikungunya arboviruses from the Ministry of Health from the health education and communication perspective

Análise das campanhas de prevenção às arbovirose dengue, zika e chikungunya do Ministério da Saúde na perspectiva da educação e comunicação em saúde

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ABSTRACT The posters of national campaigns on dengue, zika and chikungunya carried out by the Ministry of Health between 2013 and 2017 for the prevention of arboviruses were analyzed. It is a content analysis with a qualitative approach of 18 advertising pieces collected on the institution's website. Therefore, besides the textual data contained in the posters, the findings found from the description of the pieces were considered. The analytical thematic categories that emerged from the observation of the material were: mobilization; guidance; and information. After the emergence of chikungunya and zika in 2014 and 2015, respectively, the institution left its annual production from 1 to 3.6 pieces. The layout of the posters following commercial communication techniques logic, without worrying about the difference between a commercial product and a universal right. There is no link with information and communication technologies, and posters hold the population responsible for preventing diseases. The messages about care have changed, with an emphasis on the consequences and sequelae of arboviruses, with no room for education and health promotion. The transmission of information and the imposition of guidelines were found, far from what is proposed by educational communication, which presupposes actions designed according to the needs of users.

KEYWORDS Health communication. Health education. Dengue. Zika virus. Chikungunya virus.

RESUMO Buscou-se analisar os cartazes das campanhas nacionais sobre dengue, zika e chikungunya realizadas pelo Ministério da Saúde entre 2013 e 2017 para prevenção das arbovirose. Trata-se de uma análise de conteúdo com abordagem qualitativa de 18 peças publicitárias coletadas no site da instituição. Para tanto, além dos dados textuais contidos nos cartazes, foram considerados os achados encontrados a partir da descrição das peças. As categorias temáticas analíticas que emergiram da observação do material foram: mobilização; orientação; e informação. Após o surgimento da chikungunya e da zika em 2014 e 2015, respectivamente, a instituição saiu da produção anual de 1 para 3,6 peças. O layout dos cartazes segue a lógica de técnicas de comunicação comercial, sem se preocupar com a diferença entre um produto mercantil e um direito universal. Não há articulação com as tecnologias de informação e comunicação, e os cartazes responsabilizam a população pela prevenção das doenças. Houve uma mudança nas mensagens sobre os cuidados, adotando-se a ênfase nas consequências e sequelas das arbovirose, não havendo espaço para educação e promoção da saúde. Constataram-se a transmissão de informações e a imposição de orientações, distante daquilo proposto pela comunicação educativa, que pressupõe ações pensadas conforme as necessidades dos usuários.

PALAVRAS-CHAVE Comunicação em saúde. Educação em saúde. Dengue. Zika vírus. Vírus chikungunya.

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Introduction

The present study presents an analysis of media campaigns carried out by Brazilian Ministry of Health (MH) meant to prevent and combat the vector of arboviruses dengue, zika and chikungunya as social damages, besides reflections on how information transmitted by posters produced for these campaigns do or do not reflect the educative communication and health promotion. It is known how wide is the theoretical debate about information, education and communication, and therefore it is not our intend to run out the entire area, but to present the educative communication as a means of prevention and promotion.

In that purpose, some concepts are essential in this presentation. In the communication field, campaigns are defined as strategic management devices aimed at

[...] reaching a defined goal by means of the integration of a series of tools and actions, in a time span previously defined, with a purpose that is clearly defined⁽⁷⁾.

In the health area, they are used at least since 1920, for the first immunization campaigns. One tool used quite often is the poster – any graphic advertising message printed on paper or other material, whose size, format, art, color information display and all other characteristics may be adapted according to the intention and the message to be transmitted³. Usually, such graphic materials are fixed in public sites with intense circulation of those people who are intended to be reached. It is one of the most common products available for publicity and propaganda, historically and traditionally used in health campaigns².

According to the World Health Organization (WHO), some four billion people around the world are susceptible to the infection by the dengue virus; and among the state-members of the Organization, in 2010 the number of notifications exceeded 2.2 millions, reaching 3.2 millions in 2015, with

evidence that the total number of people infected by the virus of dengue might reach 390 millions per year worldwide⁴, thus making dengue, zika and chikungunya one of the most serious global problem concerning the public health. In 2017, the incidence rate of dengue was 116 cases per hundred thousand inhabitants in Brazil. In that same year, 41% of Northeastern municipalities were in alert. Over that period, the state of Mato Grosso do Sul invested R\$17.6 millions in prevention strategies. Climate, sanitation, deforestation, urbanization and population migration conditions did also corroborate for making that picture even worse⁵.

When it comes to prevention, there is a set of interventions meant to prevent specific diseases from arising, reducing their incidence and prevalence, usually based on epidemiological data⁶. The promotion of health was defined by the Ottawa Letter as the process to provide people the necessary means to improve their health and to exert better control on it⁷. That definition supposes permanent actions that involve all actors in the society, specifically meant to strengthen the skills of both individuals and groups by means of a political and social process⁸.

This is the context where educative communication takes place. However, before broaching its specific concept, one must recognize how imbricate information, education and communication actions are, and that they significantly contribute in the dialogue with communities, as they carry converging elements and interact in the process of social transformation or the changing of a phenomenon. Information in health is understood as the content or knowledge driving the decision-making, which can be either verbal or in written texts, and may subsidize the decision-making of users, and also of professionals, researchers and managers.

As to the communication in health, since the concepts were reviewed by more than 20 theoreticians who studied the area over the

last 20 years, it is assumed that it refers to dialogical processes and to the use of communicational strategies that respect the rights to information, to education and to health, and its goals are the prevention of diseases, the incentive to citizenship and the transparency in the management, as well as the promotion of better life quality of every people in their different social contexts, using the media, the production of scientific knowledge and interpersonal relationship⁹.

Education in health, by its turn, guides people towards a healthy life. The actions aimed at the education in health must be carried out according to the reality of the individuals, the families and the community, by means of the experiences and habits of life of the subjects involved in each process. In this sense, the approach adopted moves away from definitions restricted to the professional education in the health field, and comes closer to the set of practices that stimulate the autonomy people may count on to practice individual and collective care, identifying their main needs. Besides, it is intimately connected with health promotion and, at the school level, it is based on an integral and multidisciplinary view of the human being, which considers the person within the family, community, social and environmental context¹⁰.

Thus, one may understand that communicating without an initial information is not possible; and this relates¹¹ with education by means of the individual's actions. However, it should not be used as mere tools in the education process. While associated, educating is an action to be made by means of communication, not for the communication¹². Such concepts are consolidated in the health services' daily life and are indispensable as we analyze professional practices to reach health in its wider concept. This is because, in order to get to a healthy condition, the individual must be the protagonist of his own care – which can only be reached by means of education, the only possibility to promote

changes in social and individual practices.

In his theory on the liberation education, Paulo Freire explains that it transcends the simple sphere of knowing rules, methods and languages, going through to reach the translation of the knowledge available and to attach new meanings according to the universe the individual lives in, thus leading to consciousness and possible change of habits and behavior¹³. As the government's efforts and most part of the investment occur by means of actions that are discontinued, and based on campaigns and healing procedures, Brazil cannot yet refrain public health problems that require the appropriation of knowledge, individual and collective protagonism in the health care – in this case, the arboviruses.

The educative communication is presented, therefore, as a way to combat the virus and to prevent arboviruses. Based on the knowledge produced when information is translated and so is its relationship with communication, the educative communication is guided by the arrangement of personal relations of those who are involved, be them learners and teachers, or not⁴. This is a process of hearing that tries to identify the needs of both the individual and the community in order to guide transformation actions centered on the individuals and communities, the protagonists in this process.

Considering the need of educative communication actions to transform health practices aimed at the control of the *Aedes aegypti* vector, and the investment of nearly R\$190 million spent by the Ministry of Health in campaigns for the combat and prevention of arboviruses dengue, zika and chikungunya – besides the yellow fever – between 2013 and 2017⁹, we present the analysis of the poster used in the campaigns carried out by the Ministry of Health for the combat and prevention of dengue, zika and chikungunya over that period. The purpose is to understand if the use of those items is actually aimed at education and health promotion.

Methodological path

This is a qualitative research focused on the interpretation of posters produced for the Ministry of Health campaign on the theme of the arboviruses dengue, zika and chikungunya over the period from 2013 to 2017. The time clipping is justified by the uprising, in 2014 and 2015, of the new diseases chikungunya and zika, respectively, also transmitted by the vector *Aedes*.

As suggested by Miranda and Simeão¹⁴, the starting point was the identification of the typology, content, format and support of what was produced by the Health Ministry aimed at a mass communication campaign, using documental research at the database of the ministerial department. The analysis of the printed campaigns was not performed, as the institution does not count on physical assets of the material.

Data collection was carried out at the institutional electronic address¹⁵, following a process of identification, categorization and treatment for later analysis. As a whole, 18 pieces were identified and collected: one in 2013; six in 2014; three in 2015; and four in 2017 and 2018. Concerning the analysis technique, the content was the subject chosen, considering as a premise campaigns formerly studied by Vasconcelos¹⁶.

A matrix was elaborated with the material description and information found in the documents, and including the following data: year of publication of the campaign; description of the poste under analysis (colors, images and information display); slogan or phrases of effect; presence or not of information and/or orientation on preventive care against the arboviruses and health promotion, looking for the presence of any educative intentionality. It must be remarked that the research was developed based on secondary data, and therefore the authorization by the Ethic Committee on

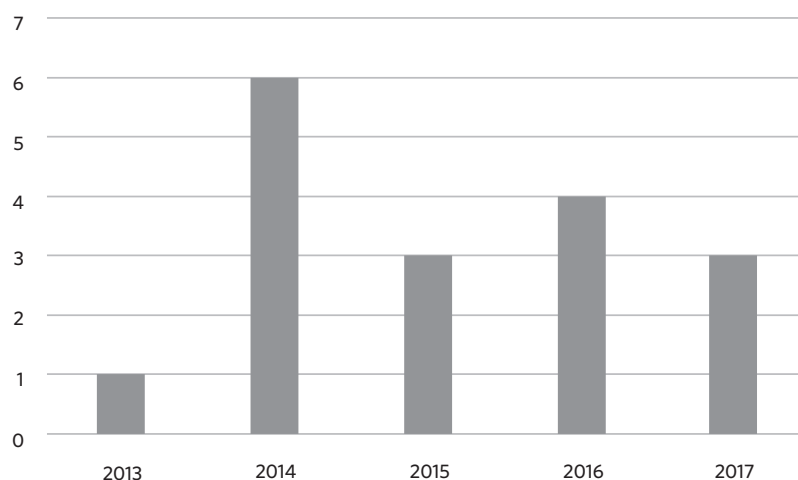
Research was not required.

Besides textual data included in the posters, findings provided by the description of the pieces were also considered. After the material description, the following theme categories emerged: mobilization; orientation; and information. *A priori*, these categories were identified based on previous literature⁹ and validated according to contents found in the campaign – that is, arboviruses prevention and health promotion. Therefore, besides sections highlighted with the concept as mentioned above, slogans included in the posters were also considered, defined as the theme-phrase of a campaign that tries to put in short and/or define its positioning³. The category ‘orientation’ includes phrases using the imperative mode and instructions on how to organize and perform actions, particularly so as to avoid locations where the mosquito may develop. As to ‘information’, the concept referred to at the introduction was considered, that is, contents or knowledge that guide the decision-making and whose intent is to warn on or share something.

Result and discussion

Seventeen pieces were analyzed in the campaigns promoted by the Health Ministry over the period from 2013 to 2017. National campaigns and the poster format stand out, and are available at the ministerial department. It is worth observing that, after the emergence of chikungunya and zika, in 2014 and 2015, respectively, the institution has multiplied by almost four times the average annual production of those pieces. In 2013, there was one single poster; the following years, that number was six times higher; in 2015, there were only three, then four, in 2016, and three in 2017 – a growth from one to 3.6 poster per year, according to *graph 1*.

Graph 1. Number of campaigns produced by the Ministry of Health on arboviruses (dengue, zika and chikungunya) from 2013 to 2017



Source: Own elaboration.

Brito³ defines poster as any graphic advertisement message printed on paper or other material. It is remarked that its dimensions, format, art, color, information displayed and all other characteristics may be adapted to the intention and the message to be transmitted. Usually, such graphic materials are fixed in public premises where circulate a great number of people who are intended to be reached. It is one of the most common advertising and propaganda products, historically and traditionally used in health campaigns² – supposedly, because it is a visual-graphic material that can be visualized and assimilated in some few seconds, without great effort of the public it is addressed to.

By observing the posters analyzed, one may notice that the main colors used were red, yellow, black and white, this latter specially used in the texts. As to the characters and images observed, the female gender is the most evident, present in seven pieces, while the male gender is only present in three. As to race and color, blacks and mulatos were the majority in the pieces. As to the age, only two

pieces showed middle-aged characters, and both were women. Despite a clear effort to represent the majority of Brazilian population, women and black people, the posters still lack the age group older than 50 years.

Those findings carry straight connection with the first category observed – mobilization. Colors are strong, characters are young, and all parts appeal to a warlike language that asks for combat, fight, attack and elimination, all actions against the vector or the disease. One may find the population made responsible in parts as: ‘A mosquito may harm a life. And the combat starts with you’; ‘The danger is bigger. And so it everybody’s responsibility’; and ‘Cleaning Saturday. Give no break to the dengue mosquito.’ However, there should be an integrated work, where everyone would feel co-responsible, understanding that the concerns beyond the elimination of the vector are required, mainly as to people’s relation with the environment and their understanding as citizens^{13,18}.

The presence of phrases such as ‘Improving your life, our commitment’ and ‘This is Brazil

taking care of its people', in 2013 and 2015, respectively, maybe could have suggested such comprehension, but they were criticized by Bucci¹⁹, who considered them just an institutional communication strategy, unduly using public money and the marketing principle to promote governmental and political party's interests. In this sense, the logic of the transmission and campaigning is insufficient once more time for mobilization²⁰, especially using a printed piece, with poor accessibility, which will usually get lost amid others with similar support on panels in health units – if they actually get there.

This discussion confirms what was observed concerning the inclusion of the names of State and municipal departments on the advertising band where logos of the institutions involved in the campaign are displayed. Those names only appear during the campaigns carried out in 2015, when the Health Ministry declared Public Health Emergency of National Importance (Espin), due to the high number of arboviruses cases and to the suspicion of a relation between zika and micricephalia⁹.

Concerning the category 'information', it was observed that those were the most frequent contents in the posters. As to the content made available, highlights were usually displayed at the center or at the upper left corner of the pieces, specially slogans. Different works point out that, in this kind of material, the title deserves more visual attention than the body of the text, which is displayed in smaller size, as in the pieces analyzed, although carrying more information. Besides, those studies also remark that people tend to look, at a glance, to the upper left corner of the poster²².

When considering commercial communication techniques, one may assert that the layout used by the Health Ministry in the production of the posters analyzed is adequate. However, taking into account the purpose of those pieces – the prevention of arboviruses and promotion of health of the population, rather than the sale of a product or service –, one may understand at last the widened concept of health, and may

also have at least some doubt. This is about public communication with a complex function; and expect that the commercial logic may fit that purpose would be, at least, uncoherent with the purpose to be achieved¹⁹.

The Disque Saúde service (Call Health) was divulged in 16 out of the 17 pieces, but with almost no prominence or orientation on how to be used in relation to the arboviruses. The address to the site – saude.gov.br –, displayed right below the 'Call Health', is even more difficult to read. As central data and recommendation for the access of other information, the site address – not the general, but the specific for the combat against the vectors of the diseases – is only divulged in 2017 pieces. Also, on inter-activity and the articulation with other communication media, it was observed that digital social media were absent in the posters produced in 2014, 2015 and for the 'Zika Zero' campaign in 2016.

One more interesting detail raised by the analysis of the posters is that the 'mosquito' was mentioned in 16 out of the 17 pieces, and the image is present in all of them. In 2014, the pieces display a cloud of those insects. The following year, it is just a detail above the words 'dengue and chikungunya'. In 2016, in the 'Zika Zero' campaign, it is a stylized cartoon villain, goggle-eyed, an appearance that does not fit the insect. That same year, except for the 'Zika Zero' campaign, and in 2017, the *Aedes* is shown in negative, a silhouette crossed by the 'prohibited' signal.

The most frequent information on the pieces affirmed that the mosquito transmitted diseases and the news: 'Now the mosquito transmits chikungunya as well'; 'Now the mosquito that transmits dengue can kill and can cause microcephaly in babies'. Dengue is the disease that is mentioned more often, twice the times as zika or chikungunya. Though the symptoms are in just two posters, consequences and sequels resulting from serious cases became the main message of posters from 2016 on, usually about death: 'Dengue kills'; and on microcephaly: 'The mosquito

that transmits dengue can kill and can cause microcephaly in babies.' No attention intended to appease the citizens following those statements was observed²³.

The piece published in 2016 brought no information about the latency period between the eggs and the birth of new vectors. But was remarkable the information that the Zika Virus can be transmitted by sexual intercourse without protection, and that even pregnant women should. These findings support the discussions about confirming or not the relation between the virus and the microcephaly. Respecting rules on risk communication, the Health Ministry transmitted relevant information in the context of crisis, despite the uncertainty, once it was necessary to prevent the infection of babies whose mothers were pregnant at the time^{24,25}.

The category 'orientations' is all written with authoritative accent and focused on the prevention. 'Keep the garbage box closed', 'Eliminate breeding spots' and 'Cover casks and water tanks'. These messages leave for the user the cautions to be taken, but disconnected from the significant universe of the individual and without explaining the reasons for those actions, their practical consequences. Possible breeding spots of arboviruses vectors – recipients used as tuns, tires, PET bottles, among others – illustrated 10 out of 18 campaigns, with attention centered on 2014, when posters showed uncovered water tank, PET bottle, untied garbage bag, tuns and plant vase represented under a cloud of mosquitos.

In the communication analyzed, pregnant women received especial attention, oriented about the use of repellent and condom, and to pre-natal exams during the campaign to prevent arboviruses. On the other hand, posters brought almost no messages suggesting visits to health services. The orientation to look for information on the disease at the ministerial site was present in the most recent products analyzed, and fake news were a huge problem during the crisis²⁴. It was noticed that one piece with orientations divulged in 2016

was used again in 2017; and the phrase 'Listen to the history of lives devastated by those diseases', in 2017 productions, is curious, to say the least: in that year, the campaign left caution orientations aside and started working with histories or real characters who had losses and sequels related with the arboviruses.

One can notice that communication carried out by the Ministry of Health is still only concerned with the prevention of diseases, following the 1920 campaigning model to carry out the actions. Traditional strategies of vertical information transmission and of orientations that make people accountable ignore the directives of an educative communication that promote health, and, according to Paulo Freire, does not produce significations and transformations in the life of the individuals¹³. From the point of view of the educative communication, these significations are indispensable for meaningful transformations to take place so as to overcome health problems. The standardized way to produce communication is still the traditional way, not based on an emancipatory education that counts on an individual who is the protagonist of his/her own knowledge.

Actions should not be solely preventive: they must be able to promote the health of the individuals, assuming that promotion is making the community capable of acting to improve the quality of life and health of the individual him/herself and the entire community. Thus, health promotion will no longer be the responsibility of solely the health professionals, turning to be a responsibility of each and every one, and yet leading the individual to search for a healthy life and the individual and collective well-being⁷.

Final considerations

An educative or health promoting communication was not perceived in the campaigns analyzed. Once more, information transmission and authoritarian orientations were found, distant from what is suggested by the

educative communication, which supposes actions idealized as to fulfil the users' needs. These were not even observed in the poster over the period analyzed.

It must be stressed that thinking about control actions and combat against these vectors, as well as to prevent arboviruses, necessarily requires information and communication actions in health; and, at the same time, they must be educative. For that purpose, managers and health professionals must elaborate dialogic strategies that promote communicative actions and that transform daily practices, besides a holistic vision of the problem to be dealt with. After all, the prevention and the control of arboviruses do not exclusively depend on the elimination of breeding spots of the *Aedes*.

The conception of campaigns based on isolated pieces or communicative practices centered on the individuals, and on the reality they are inserted in, as well as on the effective transformation of that reality, cannot be seen as educative practices. Furthermore, campaigns produced by the Health Ministry and analyzed herein are solely informative.

The critic to the fact of being a piece with not much room for the dialogue – this is a graphic material, printed – does not hinder the language, the images and the interaction possibilities based on the support from being infinite. To make it happen, one must understand that the public the message is destined to is made of persons who have rights, and

who can and must be granted more than just a passive reception of content.

Collaborators

Andrade NF (0000-0002-6137-4335)* produced the first manuscript of the article, based on her researches during the professional master in Collective Health in the Graduation Program in Collective Health of the University of Brasília. Prado EAJ (0000-0002-2731-5155)* contributed for the analysis of gross field results, based on the participation in the group of studies linked to the original research in the master program. Albarado AJ (0000-0003-2519-7690)* contributed for the results and discussions of the article and for the final revision, based on the participations in the group of studies linked to the original research in the master program. Sousa MF (0000-0001-6949-9194)*, general coordinator of the research project that guides the study, took part in the final revision of the manuscript and in the formatting of the referential in Vancouver. Mendonça AVM (0000-0002-1879-5433)* contributed for the final revision of the manuscript, with notes on studies referring to the Laboratory of Education, Information and Communication in Health of the University of Brasília (where she is coordinator), and furthermore, collaborated for the analysis resulting from the master program, where she was the main advisor. ■

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