

## Responding to STI epidemics among young people: a characterization of the language employed in educational materials

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**Abstract** *This article aims to characterize the language employed in educational and communications materials about STIs, HIV/AIDS and viral hepatitis produced by the Ministry of Health between 2010 and 2019, identifying elements related to health promotion and disease prevention. We conducted an exploratory descriptive study. The materials were selected by performing a systematic search of the Ministry of Health website focusing on the period 2010-2019. The materials were analyzed to determine the educational approaches adopted. The preventive, educational and personal development approaches were identified in 100% (201), 24.87% (50) and 7.96% (16) of the materials, respectively. The radical and popular education for health approaches were not observed. The almost exclusive focus on the preventive approach reveals that promoting changes in individual habits and behavior alone is not sufficient to combat and solve the problem of STIs, HIV/AIDS and viral hepatitis in Brazil.*

**Key words** *Health education, Sexually transmitted diseases, Educational and promotional materials, Adolescent health*

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## Introduction

Sexually transmitted infections (STI) are a global public health problem. According to the World Health Organization, global incidence of STIs is high, with more than a million new infections every day, having severe health, social and economic consequences<sup>1</sup>.

The research problem was formulated in response to the sharp rise in these infections among young people aged 15-24 years in Brazil despite Ministry of Health investment in public communication strategies. Research into this topic is warranted by data from the United Nations Children's Fund (UNICEF) showing that AIDS is the second leading cause of death among the 10-19 years age group. According to Paula Laboissière<sup>2</sup>, globally 29 adolescents are infected by HIV every hour.

In light of the above, the sexual behavior of adolescents and young people is a public health challenge, with multiple factors making young people a risk group for STIs. One of these factors is the heightened vulnerability of this group, with teenagers being more vulnerable due to cognitive and emotional immaturity during this phase of discovery and social influence<sup>3</sup>.

Communication is a key strategy for promoting health among this group, permitting the dissemination of health information and favoring communications processes in line with guidelines for public participation in the definition of public policy<sup>4,5</sup>. Communication places health at the center of the discourse, as in the case of health campaigns, which, as part of public policies, use communications knowledge as a health promotion tool. A complex connection is therefore established between communication and health, which are equivalent and complementary fields, each with its own specific characteristics<sup>4</sup>.

The Brazilian government often employs public communication strategies as part of its STI prevention and control efforts. To be well understood, assimilated and accepted, STI prevention and control policies need to consider reach and be tailored to the prior knowledge of the target audience<sup>4</sup>. Thus, the production of educational material requires careful consideration of different aspects to ensure the quality of communication for health promotion. These aspects include the language employed, regardless of the level of education of the target audience.

Conceptualizing health promotion poses the challenge of differentiating it from prevention (of risks, disease and problems)<sup>4</sup>. Health promotion

can be defined as a set of strategies and ways of enabling individuals and groups to improve their health, reducing vulnerabilities and health risks resulting from social, economic, political, cultural and environmental determinants, fostering equity and improving health status, lifestyles and quality of life<sup>5</sup>. Disease prevention, on the other hand, seeks to avoid the manifestation of a disease, where the ultimate goal is the absence of the disease<sup>6</sup>.

These concepts are not mutually exclusive, but rather complementary. However, Vasconcelos, Oliveira-Costa and Mendonça<sup>4</sup> underline that it is important for communication to include an element of health promotion rather than simply reel off health-related prevention content. Considering the important role of communication in disease prevention and health promotion, it is important to explore the approach adopted by Brazil's Ministry of Health to communications

## Objective

The present study aimed to characterize the language employed in educational and communications materials about STIs, HIV/AIDS and viral hepatitis produced by the Ministry of Health during the period 2010-2019, identifying elements related to health promotion and disease prevention.

## Frame of reference

We explore an area of knowledge called health education through the analysis of the language employed in educational and communications materials, presenting the different approaches they adopt and the ways in which these materials address health problems. To this end, we examined approaches to health education drawing on the typology proposed by Tones<sup>7</sup>, revisited and expanded by Stotz<sup>8</sup>.

This typology consists of the following approaches, which may be considered philosophical strands of education for health: the preventive approach; the educational (or informed choice) approach; the personal development approach; the radical approach; and the popular education for health approach. According to Eduardo Navarro Stotz<sup>8</sup> and Ana Lúcia Magalhães Fittipaldi *et al.*<sup>9</sup>, education for health emerged from these approaches, which are strategies that guide education practices in health care.

The preventive approach is underpinned by the assumption that individual behavior (viewed

as a risk factor) is one of the underlying causes of modern chronic degenerative diseases. From this perspective, interventions seek to encourage or persuade people to change patterns of behavior, replacing them with healthy habits, with the latter demonstrating the effectiveness of this approach<sup>8</sup>. The main criticism levelled at this approach is that it focuses on persuading people to change risk behavior without considering the social context in which they live and their subjectivities, transferring the responsibility for health solely to the individual<sup>9</sup>.

The educational (or informed choice) approach emphasizes the individual, their privacy and dignity, proposing actions based on the principle of informed choice about risks to health. This approach is deemed effective simply when the individual acquires a genuine understanding of the situation<sup>8</sup>. Thus, the educational approach is underpinned by the idea that with an understanding of the risks, people are free and able to choose<sup>9</sup>.

In general terms, the personal development approach adopts the same focus as the educational approach, broadening the scope by seeking to enhance the individual's potential. It considers that it is vital to facilitate informed choice and the development of life skills. However, it disregards external influences on health and disease, assuming that individuals are free and have the necessary conditions to make "informed choices" about behaviors or actions, when in fact a large part of the population do not<sup>8</sup>.

The above approaches emphasize individual responsibility for health and personal transformation through education. However, they adopt an individualistic, partial and corrective approach in response to problems that require primarily social and holistic solutions. Furthermore, some researchers claim that this type of approach ultimately reinforces social order as it transfers the responsibility to the individual for problems whose causes lie in social relations and, therefore, in social structures<sup>8</sup>.

Presenting an alternative to the above approaches, the radical approach considers that social conditions and structure are the underlying causes of health problems and seeks to transform the conditions that generate disease by political struggle involving the state, given that latter can change laws and regulations, having a positive impact on population health. However, this approach emphasizes social and structural aspects to the detriment of individual factors<sup>8</sup>.

A new approach was therefore added to the typology<sup>7</sup> in an attempt to address the complexity

of education for health: the popular education for health approach<sup>8</sup>. This approach emphasizes individuals' experiences of suffering and the experiences of social movements and grassroots organizations in their struggle for health. It therefore considers the dialogue between technical and scientific knowledge and the knowledge acquired through experience and popular struggles for health, promoting autonomy and collaborative knowledge building in education to transform reality<sup>9</sup>.

## Methodology

This study involved the analysis of documents available in the public domain, more specifically different types of printed, online, digital or audio materials used in Ministry of Health campaigns focusing on the control of STIs, HIV/AIDS and viral hepatitis (posters, videos, banners, radio ads, brochures/mini-brochures, jingles, billboards, T-shirts, street furniture advertising, audios, commercials, GIFs, panels, flyers, *walkmídias*, Twitter backgrounds, Facebook posts, bandanas, email marketing, mini doors, bus shelters, email subscription, avatars, condom holders, vests, blimps, caps, street banners, bicycle streamers, leaflets, truckside ads, fans, WhatsApp pieces, signs, document holders, bathroom stickers, flipchart, Facebook, YouTube and Twitter avatars, backdrops, flags, bags, broadsides, dispensers, Facebook and YouTube headers and displays, stage backgrounds, Twitter images, condom machine, parajet, charger plugs, stuff holder, stickers, squeeze bottles, windshield banners, truck rear advertising, YouTube).

Exploratory descriptive research methodology was used to characterize the language used in the educational and communications materials. The materials were selected by performing a systematic search of the Ministry of Health website (<https://www.gov.br/saude/pt-br>) focusing on the period 2010-2019. We included materials from campaigns directed at young people (10-24 years).

Preliminary screening was performed to select materials directed at this group, resulting in an initial sample of 371 materials. The selection of the final sample involved the following stages:

Categorization of material based on language: **visual language** (posters, banners, brochures/mini brochures, billboards, T-shirts, street furniture advertising, commercials, GIFs, panels, flyers, *walkmídias*, Twitter backgrounds,

Facebook posts, bandanas, email marketing, mini doors, bus shelters, email subscriptions, avatars, condom holders, vests, blimps, caps, street banners, bicycle streamers, brochures, truck side ads, fans, WhatsApp pieces, signs, document holders, bathroom stickers, flipchart, Facebook, YouTube and Twitter avatars, backdrops, flags, bags, broadsides, dispensers, Facebook and YouTube headers, displays, stage backgrounds, Twitter images, condom machine, parajet, charger plug, stuff holder, stickers, squeeze bottles, truck windshield ads, truck rear ads, YouTube); **audio-visual language** (videos); **audio language** (radio ads, jingles and audios).

Exclusion of materials with less than five items (bandanas, e-mail marketings, mini doors, bus shelters, email subscriptions, avatars, condom holders, vests, blimps, caps, street banners, bicycle streamers, brochures, truck side ads, fans, WhatsApp pieces, signs, document holders, bathroom stickers, flipcharts, Facebook®, YouTube and Twitter avatars, backdrops, flags, bags, broadsides, dispensers, Facebook and YouTube headers, displays, flyers, stage backgrounds, Twitter images, condom machine, parajet, charger plug, stuff holder, stickers, squeeze bottles, truck windshield ads, truck rear ads, YouTube). This was done to select the most commonly used materials, resulting in the removal of 70 materials (20%) and a sample at the end of this first stage of 301.

Random stratified sampling of the most commonly used materials (with more than 20 items: 85 posters and 41 videos), selecting up to two materials per year to obtain a pre-established upper limit of 20, which was close to the number of the other materials. The materials were divided into groups according to year of production and each material was given a number. Up to two numbers from each group (year) were then randomly selected using an online random number generator (<https://sorteador.com.br>).

This process resulted in the selection of 19 posters (the upper limit of 20 was not obtained because there was only one poster in 2018) and 16 videos (0 in 2010, 2 in 2011, 2012, 2013, 2014 and 2015, 1 in 2016, 2 in 2017, 1 in 2018 and 2 in 2019).

The 19 posters and 16 videos accounted for 22.35% and 39.02%, respectively, of the final sample of materials. The final sample consisted of 210 materials, corresponding to 56.60% of the initial sample. The material selection process is summarized in Figure 1.

A database was created including the following variables: campaign, year, type of material,

theme, access link and educational approach. The data were processed using Excel. Each material was categorized according to the type of language used.

The content of the materials was analyzed to determine the approach to health education adopted and how the materials addressed the population's health problems<sup>7,8</sup>.

The approaches to health education (preventive, educational, radical, personal development and popular education for health) represent possibilities for action and are not necessarily mutually exclusive<sup>8</sup>.

Materials categorized in the **preventive approach** emphasized the development of healthy behaviors to convince people of the health risks they are exposed to. The strategy of this approach is to promote the adoption of healthy behaviors and lifestyles.

Materials assigned to the **educational approach** category were predominantly informative and aimed at promoting a better understanding of a given health situation. The guiding principle of this approach is informed choice in relation to the risks to health individuals are exposed to.

The **personal development** category included materials aimed at promoting personality development by emphasizing individual potential as a strategy to foster the development of life skills.

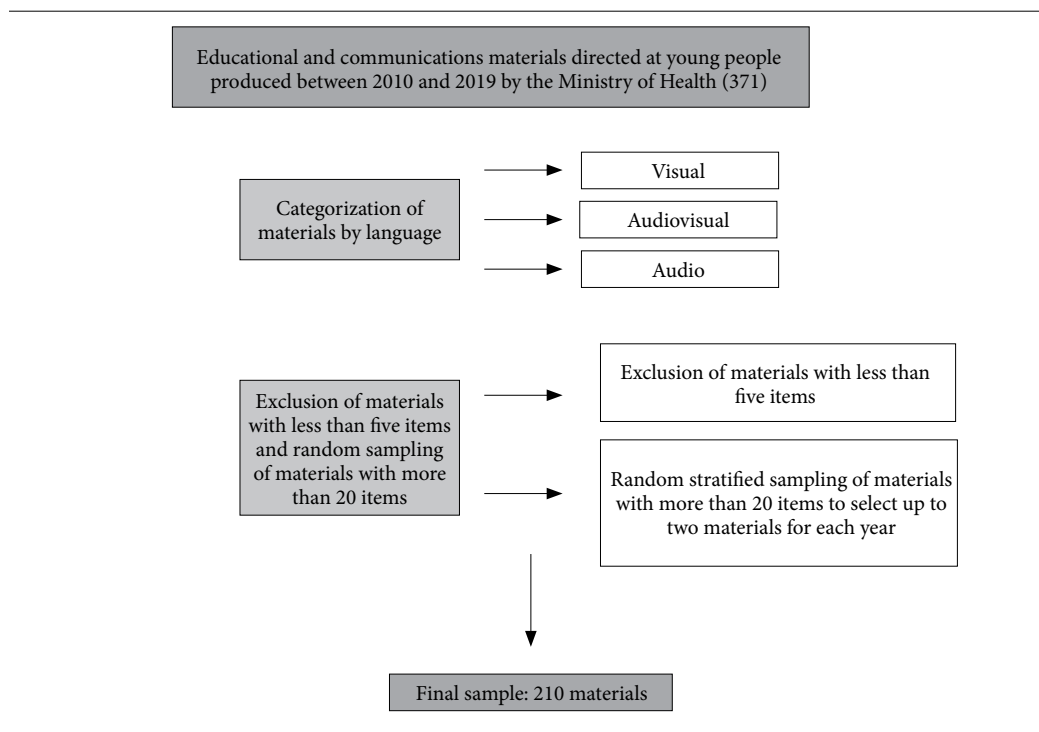
Materials in the **radical approach** category focused on developing critical awareness of health issues and political persuasion regarding determinants of health, which are viewed as a social process under this approach.

Finally, the **popular education for health approach** consisted of materials aimed at promoting a guided and intentional political struggle for health, focusing on an education practice oriented towards autonomy and the empowerment of popular classes, such as women, homosexuals, indigenous peoples, black people and other segments of society.

## Results

The preventive approach was identified in 100% of the materials analyzed (210), the educational approach in 24.87% (50) and the personal development approach in 7.96% (16). The radical and popular education for health approaches were not observed.

A total of 151 materials used visual language. Of these, 108 (71.52%) were exclusively preven-



**Figure 1.** Sample selection.

Source: Authors.

tive, 27 (17.88%) adopted the preventive and educational approach, 12 (8%) were a mix of preventive, educational and personal development approaches and 4 (2.64%) adopted both the preventive and personal development approach.

The audio language group included 43 materials. Of these, 37 (86.04%) were exclusively preventive and 6 (13.95%) were both preventive and educational.

A total of 16 materials used audiovisual language. Of these, 11 (68.75%) were exclusively preventive and 5 (31.25%) were both preventive and educational.

In short, across all language groups, 156 (74.28%) materials were exclusively preventive, 38 (18.09%) were preventive and educational, 12 (5.71%) were a mix of the preventive, educational and personal development approaches and 4 (1.90%) adopted both a preventive and personal development approach. These results are presented in Figure 2.

A total of 18 different types of materials were analyzed. The large majority used visual language (151; 75.12%), followed by audio language (43; 21.39%) and audiovisual language (16; 7.96%).

Full survey data is available at: <https://doi.org/10.48331/scielodata.WR0LZK>

## Discussion

The findings reveal that different elements of the approaches to health education are present in the materials analyzed. Below we explore the main aspects of these approaches in relation to the language used in these materials, identifying elements of health promotion and prevention.

Emphasis was placed on the preventive approach, which was identified in 100% of the materials (210). This approach makes an association between behavior patterns and patterns of disease based on the assumption that behavior is one of the underlying causes of disease and a risk factor. Preventive interventions therefore seek to encourage or persuade people to change specific patterns of behavior, replacing them with healthy lifestyle habits<sup>8</sup>.

In this type of intervention, apart from being highly technical and prescriptive, information tends to overlook the influence of social factors

on health and disease and is therefore detached from reality. Official agencies “deposit” information and recommendations on what to do and what not to do, focusing solely on individual behavioral risk factors<sup>10</sup>. These aspects were frequently found in the materials that took an exclusively preventive approach, which accounted for 74.28% of the total sample (156).

This result corroborates the findings of Vasconcelos, Oliveira-Costa and Mendonça<sup>4</sup> in a study analyzing Ministry of Health public communications campaigns between 2006 and 2013. The authors concluded that the approach adopted in government health campaigns is preventive, focusing on the individual and the provision of instructions or reminders to specific groups on an ad hoc basis. Based on catchy slogans, this type of communication is superficial and tends to be “propagandistic” or, as the authors also put it, “campaignistic”.

It is important to stress at this point that preventive measures have their value<sup>9</sup> and make an effective contribution to reducing risks and preventing diseases and health problems in specific groups. However, this message alone is not strong enough to mobilize communities for action, as health inequities persist and are even worsening in many contexts<sup>9</sup>.

Stotz<sup>8</sup> points out that choosing one approach does not automatically exclude others, as it is possible for different approaches to coexist, as was observed in our study. The educational approach, also known as the “informed choice approach”, was the second most common approach, being found in 50 materials (24.87%). This approach emerged with the creation of the Family Health Program in 1994, proposing actions based on the principle of informed choice about risks to health with a view to promoting the humanization of health and helping patients gain a genuine understanding of a given situation<sup>8</sup>.

However, Travassos<sup>11</sup> suggests that while the information conveyed by interventions that adopt this approach apparently seeks to promote autonomy to make informed choices, it reduces possibilities of independence as it is loaded with science’s “incontestable truths”. Under this approach, subjects are viewed as knowing nothing about healthy living. From this perspective, “being autonomous” is taking care of oneself following the technical guidance handed out by health professionals or, in other words, complying with standard rules of behavior that are considered healthy. According to the author, for individuals to take an active role in their health, they need to

be heard, which is one of the ways of promoting individual autonomy and empowerment.

However, we cannot ignore the fact that a healthy lifestyle is a personal choice and there are many benefits to be gained from providing information so that individuals are able to make informed choices about the health pros and cons of certain habits and behaviors. In this sense, the educational approach incorporates some interesting communicational aspects.

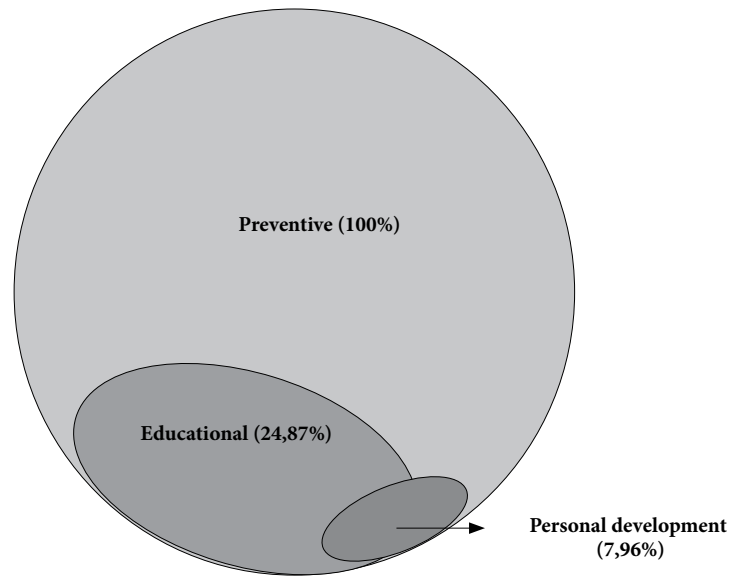
The personal development approach was found in 16 (7.96%) materials. This approach broadens the scope of the educational approach by enhancing the potential of individuals, developing life skills such as communication, body awareness and time management for medication adherence. Stotz<sup>8</sup> states that these skills increase an individual’s capacity to control their life and reject the belief that life and health are controlled from the “outside”.

This approach can incorporate communicational aspects that are relevant to STI prevention among young people, since one of the leading factors associated with the high incidence of these diseases among this group is lack of awareness of their vulnerability. Many young people are not prepared to deal with sexuality, have difficulty making decisions, do not have a fully defined identity and experience a conflict between emotions and reason, often being led by the need to fit into a certain social group<sup>12</sup>.

In short, the three approaches found in the materials (preventive, educational and personal development) employ language guided by the assumption of individual responsibility for attitudes and transformation through education. However, while promoting changes in individual habits and behavior has its value, alone, it is not sufficient to prevent STIs, HIV/AIDS and viral hepatitis in Brazil. According to Stotz<sup>8</sup>, most people in middle-income countries like Brazil and a sizeable portion of the population of developed countries do not have the conditions necessary to make informed choices when it comes to behavior and actions<sup>8</sup>.

In addition, it is important to understand that individuals do not always act according to reason and that subjectivities and social context also influence choices and actions<sup>9</sup>. Guidance and advice should be provided without diminishing the context in which people live, their culture and ways of coping with life’s challenges<sup>13</sup>.

We performed an analysis of educational and communications materials found on the Ministry of Health website, observing elements that



The radical and popular education for health approaches were not observed.

**Figure 2.** Approaches observed in the materials.

Source: Authors.

have already been disseminated. It is important to mention, however, that the radical and popular education for health approaches depend on dialogue and are therefore more likely to be used in the formulation of campaigns, posing a potential limitation for this study.

This explains why the radical and popular education for health approaches were not observed. These approaches are not simple materials, but rather educational actions used in the context of dialogue between the educator and the learner, which affords explanations and joint inquiry and reflection<sup>13</sup>. These approaches were maintained in the study to broaden the debate about the language-related aspects of these materials and the formulation of health campaigns.

The radical approach proposes that, instead of expending efforts to transfer responsibility exclusively to individuals, the state should promote political, economic and social change to support individual choices that lead to better health. Focusing on the political struggle for health directed toward popular classes in spaces of popular struggle, the popular education for health approach places itself at the service of the “oppressed” in Brazilian society. In both approaches,

actions shift away from the individual domain and are seen as a social process<sup>8,11</sup>.

Using the approaches to health education as a frame of reference, Fittipaldi, O’Dwyer and Henriques<sup>9</sup> performed a document analysis to examine education for health strategies used in the formulation of public policies. The radical approach was evidenced essentially in the promotion of public participation in the formulation and control of public health policies – encouraging cooperation and intra and intersectoral coordination to address determinants of health – and in participatory management to foster the active participation of relevant actors in the definition of guiding principles.

In this sense, for communication for sexual health promotion to be effective, young people should be directly involved in process from the formulation stage, as the participation of this group in their own learning can be an effective way to engage this population. Making young people passive receptors of instructions and obligations tends to place them in an inferior position and does not ascribe them the right to articulate themselves around the matters affecting them<sup>14</sup>. Through youth participation, it is possible to

promote the autonomy of young people, making them agents of change within their social circle<sup>15</sup>.

The popular education for health approach was observed in the formulation of public policies designed to strengthen popular health care practices, viewing dialogue as the convergence of knowledge involving the respectful sharing of various types of knowledge, expanding critical knowledge and promoting autonomy and empowerment. This approach was also identified in educational actions aimed at influencing the disease and health process related to the experiences of subjects through the promotion of individual autonomy, with the aim of building more autonomous and effective therapeutic and life possibilities<sup>9</sup>.

The planning of educational actions for sexual health promotion and the prevention of STIs, HIV/AIDS and viral hepatitis among young people should therefore be based on the experiences of this group. In this way, interventions establish a dialogue between technical and popular knowledge as a strategy for achieving the objectives of health promotion, developing personal skills to strengthen autonomy, with emphasis on public participation and co-responsibility<sup>9</sup>.

It is therefore important to enable young people to express themselves as subjects of the community, offer their opinion and say what they feel. This strategy focuses on helping youth to produce new knowledge and find new solutions, since that which is deemed to be an absolute certainty often prevents the emergence of new knowledge<sup>16</sup>.

Our findings also reveal the diversity of publicity materials used in Ministry of Health campaigns addressing the theme. The data presented also show that the dissemination of information on health promotion and STI prevention to young people is widespread in Brazil, considering the multiple *means of communication* employed and the large variety of types of materials, amounting to 18 different types. This can be seen as positive as it demonstrates that the Ministry of Health is concerned with creating different educational proposals to target a range of audiences.

The categorization of the types of materials into different languages (visual, audiovisual and audio) and the correlation of these categories with educational approaches showed that visual language was the only language to incorporate the personal development approach. In this group, posters were the most common type of material in terms of quantity. Before the final selection of the elements that made up this study,

85 posters were found, meaning it was necessary to perform random sampling to obtain an analyzable sample.

The findings also show that audiovisual materials tend to be more associated with the preventive and educational approaches. This may be explained by the fact that videos are knowledge-dissemination educational resources that are capable of establishing multidimensional forms of sensory, emotional and rational communication, thus facilitating interaction. In recent decades, videos have therefore become the most widely-used technical audiovisual media and their use continues to rise<sup>17</sup>.

### Final considerations

The materials analyzed demonstrate the presence of various approaches to health education. Although not all the approaches outlined in our frame of reference were observed in the materials analyzed, the range of complementary concepts provide an opportunity to broaden the discussion about the language-related aspects of these materials and the formulation of health campaigns.

The three approaches found in the materials (preventive, educational and personal development) employ a language guided by the assumption of individual responsibility for attitudes and personal transformation through education. However, while promoting changes in individual habits and behavior has its value, it is important to consider that, alone, it is not sufficient to combat and resolve the problem of STIs, HIV/AIDS and viral hepatitis in Brazil.

The findings also reveal the diversity of publicity materials used, amounting to 18 different types. This can be seen as positive as the creation of different educational proposals expresses the diversity of realities.

The categorization of the types of materials into languages (visual, audiovisual and audio) and the correlation of these categories with educational approaches also showed that visual language was the only language to incorporate the personal development approach and that audiovisual materials tend to be more associated with the preventive and educational approaches.

The radical and popular education for health approaches provided interesting perspectives on sex education campaigns for young people by promoting public participation in their formulation, enabling the active participation of rele-



vant actors and the respectful sharing of a diverse range of types of knowledge by strengthening popular health care practices. The adoption of these approaches in the formulation of communication campaigns is a strategy that can contribute to achieving the objectives of health promotion.

Considering that this study analyzed educational and communications materials obtained from the Ministry of Health website, it was not possible to clearly define whether the radical and popular education for health approaches were employed. This is one of the limitations of this study, since the observation of the approaches

was based on document analysis and the radical and popular education for health approaches do not simply employ materials, but rather use educational actions, which are more suited to the formulation of campaigns.

Our findings therefore suggest that essentially preventive approaches – found in all the materials analyzed – are limited in their ability to combat STIs, HIV/AIDS and viral hepatitis and that it is necessary to invest in strategies that promote dialogue, as proposed by educational actions underpinned by the radical and popular education for health approaches.

**Collaborations**

All authors contributed fundamentally in the conception and construction of the study and agreed with the final version sent to publication.

**Funding**

Conselho Nacional de Desenvolvimento Científico e Tecnológico.

## References

- World Health Organization (WHO). Sexually transmitted infections: implementing the Global STI Strategy [Internet]. 2017. [cited 2022 jul 21]. Available from: <https://apps.who.int/iris/bitstream/handle/10665/258740/WHO-RHR-17.18-eng.pdf;jsessionid=E5424A57742AD58884D9AD1FF-9DE9470?sequence=1>
- Laboissière P. Unicef alerta: mortes por aids entre adolescentes mais que dobraram desde 2000 [Internet]. 2016. [acessado 2022 jul 21]. Disponível em: <https://agenciabrasil.ebc.com.br/geral/noticia/2016-07/unicef-alerta-mortes-por-aids-entre-adolescentes-mais-que-dobraram-desde-2000>
- Caldana N, Dias CC, Wiss CR, Cruz MC, Castro VLP. Sífilis na gestação da adolescente em ribeirão preto: um Panorama da última década. *Braz J Hea Rev* 2021; 4(1):926-934.
- Vasconcelos WRM, Oliveira-Costa MS, Mendonça AVM. Promoção ou prevenção? Análise das estratégias de comunicação do Ministério da Saúde no Brasil de 2006 a 2013. *Rev Electron Comun Inf Inov Saude* 2016; 10(2):1-11.
- Brasil. Ministério da Saúde (MS). Secretaria de Vigilância em Saúde. *Política Nacional de Promoção da Saúde (PNPS): revisão da Portaria MS/GM nº 687, de 30 de março de 2006*. Brasília: MS; 2015.
- Buss PM. Uma introdução ao conceito de promoção da saúde. In: Czeresnia D, Freitas CM, organizadores. *Promoção da saúde: conceitos, reflexões, tendências*. Rio de Janeiro: Editora Fiocruz; 2003. p. 19-42.
- Tones BR. Educación para la salud: prevención o subversión? Tendencias actuales en educación sanitária. *Quadern CAPS* 1987; (8):27-37.
- Stotz EN. Enfoques sobre educação e saúde. In: Valla VV, Stotz EM, organizadores. *Participação popular, educação e saúde: teoria e prática*. Rio de Janeiro: Relume-Dumará; 1993; p. 11-22.
- Fittipaldi ALM, O'Dwyer G, Henriques P. Educação em saúde na atenção primária: as abordagens e estratégias contempladas nas políticas públicas de saúde. *Interface (Botucatu)* 2021; 25:e200806.
- Pimenta DN, Leandro A, Schall VT. A estética do grotesco e a produção audiovisual para a educação em saúde: segregação ou empatia? O caso das leishmanioses no Brasil. In: Monteiro S, Pimenta D, organizadoras. *Ciência, saúde e educação: o legado de Virgínia Schall*. Rio de Janeiro: Editora Fiocruz; 2018. p. 281-300.
- Travassos RS. Cuidado, autonomia e emancipação. In: Bornstein VJ, Alencar A, Leandro BBS, Matielo E, Nespole G, Goldschmidt IL, Pinto JMC, Wong Un JA, Princeswal M, Oliveira MS, Bonetti OP, Travassos RS, Paiva TCR, Trindade T., organizadores. *Curso de aperfeiçoamento em educação popular em saúde: textos de apoio*. Rio de Janeiro: EPSJV; 2016; p. 145-147.
- Ciriaco NLC, Pereira LAAC, Costa RA. A importância do conhecimento sobre Infecções Sexualmente Transmissíveis (IST) pelos adolescentes e a necessidade de uma abordagem que vá além das concepções biológicas. *Em Extensao* 2019; 18(1): 63-80.
- Morel CMTM, Pereira IDF, Lopes MCR. Para pensar sobre materiais educativos. In: Morel CMTM, Pereira IDF, Lopes MCR, organizadoras. *Educação em saúde: material didático para formação técnica de agentes comunitários de saúde*. Rio de Janeiro: EPSJV; 2020; p. 175-177.
- Campos HM, Paiva CGA, Mourthé ICA, Ferreira YF, Fonseca MC. Direitos humanos, cidadania sexual e promoção de saúde: diálogos de saberes entre pesquisadores e adolescentes. *Saude Debate* 2017; 41(113): 658-669.
- Lima P, Venturelli Y, Siqueira A. Protagonismo juvenil: a importância da participação de jovens no processo de construção de políticas públicas e materiais educativos. In: Mendonça AVM, Parreira CMSE, Andrade NF, Sousa ME, organizadoras. *Comunicação e educação em saúde – jovens e HIV/Aids e hepatites virais: aspectos teórico-conceituais*. Brasília: Editora ECoS; 2022. p. 111-120.
- Travassos RS. Educação popular: um outro olhar para a saúde. In: Morel CMTM, Pereira IF, Lopes MCR, organizadoras. *Educação em saúde: material didático para formação técnica de agentes comunitários de saúde*. Rio de Janeiro: EPSJV; 2020; p. 221-230.
- Alcântara YCL, Santos Junior JB, Silva J, Santana ES, Cavalcante MNS, Lima Filho AM. Desafios na criação de um vídeo sobre infecções sexualmente transmissíveis. *Div Journ* 2022; 7(2):1023-1030.

Article submitted 27/08/2022

Approved 22/05/2023

Final version submitted 24/05/2023

Chief editors: Romeu Gomes, Antônio Augusto Moura da Silva