

Analysis of Sexually Transmitted Infections Prevention Campaigns between 2008 and 2020

André Teixeira Stephanou* , Isabella Kahl de Freitas , & Ana Cristina Garcia Dias 

Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil

ABSTRACT – This study aimed to analyze the sexually transmitted infections (STIs) prevention campaigns promoted by the Brazilian Ministry of Health between 2008 and 2020. Fifty-three campaigns from the digital archive were included in the directed content analysis. The analysis was conducted based on the concepts of Combination Prevention and the Theory of Planned Behavior (TPB). Condom use and STI testing were constantly promoted, to the detriment of alternative preventive behaviors. The TPB concepts in the campaigns suggest the compatibility of the materials with the theory. We conclude that the campaigns present the desirable aspects of prevention. However, recent campaigns focused on aversive materials, which goes against studies that report negative effects from these strategies and is associated with the rise of moralist perspectives on prevention.

KEYWORDS: HIV, STI, communication, campaign, Theory of Planned Behavior

Análise de Campanhas Preventivas a Infecções Sexualmente Transmissíveis entre 2008 e 2020

RESUMO – Objetivou-se analisar as campanhas de prevenção a infecções sexualmente transmissíveis (ISTs) veiculadas pelo Ministério da Saúde entre 2008 e 2020. Cinquenta e três campanhas disponíveis no acervo digital foram incluídas na análise de conteúdo dirigida. A análise foi realizada com base nos conceitos da Prevenção Combinada e da Teoria do Comportamento Planejado (TCP). O uso de camisinha e a realização de testagem para ISTs foram constantemente promovidos, em detrimento de comportamentos preventivos alternativos. Os conceitos da TCP nas campanhas indicam compatibilidade dos materiais com pressupostos teóricos. Conclui-se que as campanhas abordam os aspectos desejáveis da prevenção. Contudo, as campanhas mais recentes investiram em materiais aversivos, estratégia contraindicada por outros estudos, porém associada ao crescimento da perspectiva moralista de prevenção.

PALAVRAS-CHAVE: HIV, IST, comunicação, campanha, Teoria do Comportamento Planejado

The Brazilian response to the prevention of HIV/AIDS is internationally highlighted as an example of articulation between public health institutions and civil society (Berkman et al., 2005; Fonseca & Bastos, 2018; Susan, 2006). Mass communication campaigns have played an important role in this response and the prevention of other sexually transmitted infections (STIs) (Fonseca & Bastos, 2018; Susan, 2006). However, the effect of campaigns aimed at promoting preventive behaviors does not always occur as expected (Albarracín et al., 2005; Noar, 2006). When thinking about broadcast campaigns in the health area, the process must be grounded in solid scientific bases and social responsibility

(Noar, 2006). Furthermore, communication strategies must clearly understand who the target audience is and how to access it, taking into account the social and economic factors of each group (Lustria et al., 2013).

Currently, HIV prevention strategies fall within the components of the Combination Prevention paradigm (Ministério da Saúde, 2017). The Combination Prevention proposal highlights the need for a multidimensional approach to HIV prevention, and many of its assumptions also apply to the prevention of other STIs. This paradigm classifies HIV preventive interventions into three dimensions: biomedical, behavioral, and structural interventions.

* E-mail: astephanou@gmail.com

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Biomedical interventions aim to reduce the risk of exposure of the population to STIs, by using barrier methods, Post-Exposure Prophylaxis (PEP), and Pre-Exposure Prophylaxis (PrEP) for HIV, as well as immunization against other STIs. Behavioral interventions include encouraging adherence to routine testing and condom use behaviors, with communication strategies to increase the frequency of such behaviors in the population. Structural interventions are related to actions that aim to reduce stigma and discrimination which increase the vulnerability of some populations to HIV and other STIs. These interventions include combating racism, sexism, homophobia, and transphobia, among other forms of discrimination. They aim to intensify educational and awareness campaigns and promote legal mechanisms to support these populations (Ministério da Saúde, 2017).

Mass communication campaigns are a tool whose potential to promote changes in health behaviors is constantly being evaluated in the scientific literature (Francis et al., 2016; Noar, 2006; Pedrana et al., 2014; Van Stee et al., 2018). The Ministry of Health annually produces several campaigns for the prevention of HIV and other STIs. However, there are few records of evaluations on the reach and effect of these campaigns (Oliveira et al., 2006; Saraceni et al., 2005). One of the most recent examples was the evaluation of the 2003 Carnival STI prevention campaign, promoted by the Ministry of Health (Porto, 2005). The evaluation focused on the reach of the campaign and its effects on knowledge and attitudes toward condom acquisition by women aged 13 to 19. Posters and television were the main vehicles where the participants remembered having seen the campaign. While TV exposure was associated with more favorable attitudes toward condoms, participants exposed to posters had less favorable attitudes. These results reinforce the importance of analyzing the effects of communication materials, insofar as the same campaign can have different effects depending on the format and placement. It is, therefore, necessary to assess how communication materials that address HIV/STIs present the theme, and whether their content addresses relevant theoretical concepts.

A common assumption in the development of HIV/STI prevention campaigns is that informing people about the risks of certain behaviors will be enough to reduce their occurrence. However, studies show that having correct information about HIV/STIs and preventive behaviors is not necessarily associated with the performance of these behaviors (Abraham et al., 2002; Camargo et al., 2011). For Noar (2006), the effect of health campaigns depends on how existing knowledge about mass communication is applied. Thus, highlighting the importance of developing campaigns based on scientific evidence is essential to expand their impact and enable the recognition of the components related to the achieved results (Noar, 2006). Using theoretical constructs in the development of campaign messages is one way to favor this foundation. This measure allows us to understand why

campaigns are successful or unsuccessful, which aspects have had a greater or lesser influence on results, and how it is possible to improve these results.

Theories from the Cognitive Social Psychology field, which deal with the psychosocial aspects involved in the performance of preventive behaviors and persuasive communication strategies, have been used in the development of preventive campaigns (Noar, 2006). The Theory of Planned Behavior (TPB) is one of the models aimed at understanding the psychological determinants of health behaviors, such as condom use (Albarracín et al., 2001; Tyson et al., 2014). TPB proposes that the intention to perform a behavior is the main precursor of the performance of that behavior (Ajzen, 1991). This intention results from the Attitude toward the performance of the behavior, the Subjective Norm, and the Perceived Control over the behavior.

Attitude towards a behavior refers to the expectations the individual has regarding the performance of certain behavior. If there are perceived negative consequences associated with condom use, the intention to perform this behavior may decrease. The perception that condom use can prevent contact with HIV or other STIs would increase the intention to perform this behavior. People in a long-term monogamous relationship, for example, may attribute fewer positive consequences to condom use due to the expectations of trust established between the couple, which imply a lower risk of STIs.

The Subjective Norm represents each person's perception of the set of social expectations concerning the performance of certain behavior. Thus, if the individual perceives that their social context does not support the performance of the behavior in question, it is more likely that this performance will decrease.

Furthermore, the Subjective Norm can be divided into Injunctive Norm and Descriptive Norm (Fishbein & Ajzen, 2010). The Injunctive Norm deals with the individual's perception of what others think about performing a certain behavior. Thus, if the individual perceives that other people approve of the behavior of using condoms, the Injunctive Norm will be favorable. The Descriptive Norm, on the other hand, refers to the individual's perception of other people's behavior. Therefore, if the individual perceives that people close to him or her do not often test for STIs, the Descriptive Norm measures will be contrary to the performance of this behavior.

Perceived Control over behavior can be defined as the individual's self-assessment concerning their autonomy and ability to perform that behavior (Fishbein & Ajzen, 2010). If the behavior is perceived as difficult to perform, the Perceived Control will be lower. For example, if an individual finds it very difficult to get tested for STIs because they do not have accessible health services in their community, their Perceived Control will be lower.

The development of communication materials on STI prevention based on TPB constructs could improve the

effectiveness of these campaigns, as it would allow a better analysis of their effects. However, the lack of definition on the theoretical basis and analysis plans on the effects of campaigns makes their evaluations difficult. This study aimed to evaluate HIV prevention campaigns and other STIs promoted by the Ministry of Health based on TPB and the Combination Prevention paradigm. Specifically, this study

aimed to identify which behaviors are presented as relevant in STI prevention campaigns; identify the frequency of materials that present content related to TPB constructs; analyze the suitability of materials that refer to some TPB construct from the literature on the subject; analyze the suitability of materials concerning the components of Combination Prevention.

METHOD

A cross-sectional study of quantitative and qualitative analysis of health communication materials was carried out. All materials available in the Ministry of Health's digital collection that were broadcast between January 2008 and April 2020 were included in the study. Campaigns without materials available for download in the collection were excluded. A total of 53 campaigns were analyzed.

Instruments

An analysis matrix developed by the researchers was used to analyze the materials. The matrix was based on the work of Vasconcelos et al. (2016), to allow the encoding of data into categories relevant to TPB and the components of Combination Prevention. Table 1 presents the analysis categories.

Procedures

The materials available in the digital collection were gathered and organized into individual campaigns by year of publication. Graphic and audiovisual materials were included. After all the materials were collected, those in audiovisual format were transcribed for the textual analysis of the messages.

Two researchers were responsible for analyzing the collected material. Initially, they were trained with the analysis matrix, then each researcher independently reviewed all collected materials. A third researcher took part in the discussion of divergences. At the end of the analyses, the average Kappa coefficient was .72, with the category of Promotion of Protagonism having the lowest value ($\kappa = .19$). Tables with the coding of each campaign and the Kappa coefficients for each category are available in the Open Science Framework repository (<https://osf.io/k79p3>), as well as examples of messages that were coded in each category.

Table 1
Analysis categories.

Combination Prevention
Biomedical Interventions
Immunization ($\kappa = 0,77$)
PrEP e PEP ($\kappa = 1$)
Treatment for everyone ($\kappa = 0$)
Behavioral Interventions
Counseling ($\kappa = 0$)
Adherence to condoms/Barrier Methods ($\kappa = 0.62$)
Continuous care ($\kappa = 0$)
Incentive to routine testing/Counseling and testing ($\kappa = 0.96$)
Harm reduction ($\kappa = 1$)
Structural Interventions
Testing and Counseling Center as a strategic service in the line of care ($\kappa = 0.88$)
Decrease in inequalities ($\kappa = 0.88$)
Information propagation ($\kappa = 0.72$)
Permanent Health Education ($\kappa = 0$)
Establishment of norms and legal frameworks ($\kappa = 0$)
Promotion of protagonism ($\kappa = 0.19$)
Theory of Planned Behavior
Target-Behavior
Attitude
Consequence of behavior ($\kappa = 0.80$)
Assessment of consequences ($\kappa = 0.88$)
Perceived Control
Barriers ($\kappa = 0.80$)
Facilitators ($\kappa = 0.87$)
Subjective Norms
Injunctive Norm ($\kappa = 0.50$)
Descriptive Norm ($\kappa = 0.70$)

Note. The categories "Adherence to condoms" and "Barrier methods" were condensed into one, as well as the categories "Incentive to routine testing" and "Counseling and testing", due to the observation that messages that fit into one necessarily fit into the other. Kappa coefficients equal to one or zero occurred in categories with perfect agreement and/or low frequency of categorization. These results were not entered into the average calculation.

Data Analysis

Directed content analysis (Hsieh & Shannon, 2005) was used for coding the materials based on the TPB and Combination Prevention components. Directed content analysis is suitable for this research proposal as it allows

the identification, in the collected material, of categories or themes, defined a priori based on TPB and Combination Prevention. Similar analyzes have been applied to public health campaigns in other contexts (Knox et al., 2015; Ramanadhan et al., 2013; Vasconcelos et al., 2016).

RESULTS

The analysis of prevention campaigns has demonstrated some patterns in the implementation of these initiatives over the years. Two dates were recurrent in campaigns broadcast between 2008 and 2020: Carnival and World AIDS Day. World AIDS Day motivated campaigns in all the years analyzed, while Carnival campaigns were registered annually between 2008 and 2018.

There was a decrease in the number of campaigns available in the collection from 2018 onwards. This does not indicate that fewer communication materials were disseminated, but it suggests a smaller diversity of approaches. Campaigns from previous years might have been reused in later years. However, when using this practice, some materials may present outdated references, or not have the same expected effect as when they were initially produced.

Components of Combination Prevention in Campaigns

As for the components of Combination Prevention, there was a greater focus on biomedical and behavioral strategies, particularly due to the presence of incentives for barrier methods in most campaigns. Structural interventions appear in the form of information dissemination, generally on biomedical or behavioral strategies. Some structural interventions such as the “Establishment of norms and legal frameworks”, “Permanent health education”, and the “Strengthening the Unified Brazilian Health System (SUS) structure for Combination Prevention” do not directly apply to the content of mass communications. Other strategies such as “Fostering protagonism”, “Reducing inequalities”, and the “Testing and Counseling Center (TCC) as a strategic service in the line of care” received less attention than would be expected in communications based on Combination Prevention. Figure S1, available in the supplementary materials repository (<https://osf.io/k79p3>), illustrates the occurrence of the analyzed categories in campaigns over the years.

In the case of “Decreasing inequalities”, only one campaign aired after 2012 includes messages dealing with this topic. In the “Undetectable” campaign for World AIDS Day 2018, several people living with HIV speak about the importance of treatment and aspects which facilitate adherence. This campaign was a landmark in its emphasis on the claim that successful treatment with an undetectable HIV viral load prevents transmission of HIV. With this

message and the testimonies of many people sharing their identities and life experiences, the campaign may help fight the stigma that affects people living with HIV and hinders their access to health services. The fight against stigma was also central to the 2009 campaigns entitled “Living with AIDS is possible; with prejudice, it is not” and “My name is not AIDS”.

Campaigns aimed at the health of the LGBTQIA+ population also presented content to fight stigma. In 2010 and 2012, campaigns were broadcast with the same title “I am a *travesti*¹, I have the right to be who I am”. These campaigns contained materials aimed at both *travesti* and health and education professionals, highlighting again the harm caused by prejudice in the lives of *travestis*. Other key populations of Combination Prevention, such as men who have sex with men (MSM) and sex workers, were highlighted in material from other campaigns, such as the “National Plan to Combat the AIDS and STD Epidemic among Gays, MSM and *travestis*”, from 2009, and “Prevention for sex workers”, 2013. Although the analysis did not show whether the reduction of inequalities was the focus of the messages from these campaigns, they might have had this effect on the population. To find this information, it would be necessary to assess the reach and impact of these campaigns on the experiences of LGBTQIA+ people and sex workers in the health system, for example.

The “Promotion of protagonism” appears between 2016 and 2018 in the campaigns, coinciding with the adoption of Combination Prevention as the guiding axis of prevention measures. The “Combination Prevention” campaign highlights the message “choose your form of prevention”, bringing information about all biomedical and behavioral methods available in SUS at that time, such as PEP, treatment for all, testing, and barrier methods. A poster aimed at healthcare professionals as part of the 2017 World AIDS Day “Let’s Mingle” campaign encourages users to be provided with information on all prevention methods so they can make their choice. This campaign also adds PrEP as a strategy, based on its inclusion in the SUS. After 2018, campaigns not only fail to promote protagonism but also retreat in their recommendations. The “HIV/AIDS. If the doubt ends, life goes on”, of World AIDS Day 2019, brings

¹ *Travesti* is a culturally specific gender identity term for Brazilians. See Costa et al. (2018) for further reference.

as a motto the uncertainty arising from an unprotected sexual relationship. For combined prevention, PEP would be an HIV prevention option, as well as testing. The campaign, however, only encourages the search for testing as an alternative to deal with this situation.

“Harm reduction” is an action listed in the Behavioral Strategies of Combination Prevention, focusing on people who use alcohol, other drugs, industrial silicone, and hormones. Therefore, this category appears in campaign messages regarding the risks of adopting these behaviors and ways to minimize them, according to personal preference. In the 2012 campaign, “I am a *travesti*, I have the right to be who I am”, there are guidelines for health professionals on care to be adopted in their practices: not prescribing or judging behaviors, but informing and guiding the user about options and risks without discrimination.

Messages encouraging condom use and testing for STIs were the most constant throughout the campaigns. Phrases such as: “Always use condoms!” and “Without a condom, you can’t do it” are present in most of the analyzed campaigns. In general, the written content is linked to images of condoms distributed by the Ministry of Health. In conjunction with the category of “Information propagation”, some materials present the appropriate way to wear condoms.

Messages such as “Get tested” and “Testing is also preventing” are constant in campaigns and cover both categories. The mention of testing as a method of prevention occurs in most campaigns. The 2009 “It’s a pleasure, STD-free sex” campaign does not mention the test, despite dealing with the importance of knowing whether you have been infected. As an exception, this material informs about the symptoms of STIs. This way, the public can identify some of these infections and seek treatment from health services.

Few campaigns differentiate between rapid and laboratory testing or provide additional information regarding testing for STIs. The 2016 World Viral Hepatitis Day campaign informs that “The test can save your life” and encourages people who are over 40, as well as people who have had surgery, blood transfusion, or a tattoo before 1993 to seek testing. Moreover, HIV prevention campaigns warn about the one-month waiting period after unprotected sex to get tested and refer to the possibility of starting treatment in the event of a positive result.

Among the biomedical strategies, “Treatment for everyone” appeared little in the campaigns. Although treatment adherence is a constant target behavior in the analyzed materials, few messages highlight the importance of every person living with HIV being on treatment. The 2018 “Undetectable” campaign is one of the exceptions. It states: “Being undetectable is also one of the ways to prevent HIV”. Previously, campaigns from 2014 onwards adopted slogans like “Start treatment now”, from the 2015 “Carnival” campaign.

Similarly, both PEP and PrEP appear sporadically in campaigns, especially as encouraged behaviors. The 2016

“Carnival” campaign has specific material on PEP aimed at people who had condomless sex: “Start preventive treatment as soon as possible”. In the 2015 “Carnival” campaign, information about PEP and PrEP is part of a leaflet, highlighting that the implementation of PrEP in the health system was still in the testing phase. Subsequent campaigns only guide people to “search for information” regarding these methods in health facilities.

The “Information propagation” was found in most campaigns and covered the most diverse aspects of Combination Prevention. Epidemiological data on STIs, their symptoms, and treatment methods were included in campaigns aimed at combating hepatitis, syphilis, and HIV. Besides, a scheme with the forms of transmission of HIV, “this is how you get it; this is how you don’t get it”, is available in materials from several years.

The Theory of Planned Behavior in Prevention Campaigns

Among TPB’s concepts, the category of “Consequence of behavior”, which makes up the Attitude component, includes messages related to the outcomes of behaviors of using condoms, being tested for STIs, and HIV treatment. Throughout the campaigns, there was a greater emphasis on the desirable consequences of these behaviors.

Protection against STIs is cited in most campaigns over the years, while prevention of unplanned pregnancy appears less frequently. The 2020 campaign aimed at young people “Using a condom is everyone’s responsibility” has these two consequences. Testing for STIs, on the other hand, is associated with alleviating concern about a possible positive result. The 2018 “Undetectable” campaign contains real-life stories concerning HIV diagnosis and the consequences of treatment and the virus becoming undetectable. Possibilities for a healthy life are reported from HIV treatment, including that people with an undetectable viral load do not transmit the virus.

The “Assessment of consequences”, which is another aspect of the Attitude component, concerns the value assigned to the expected consequences of a behavior. The campaigns show that one of the main consequences of condom use is protection against STIs. Thus, reporting that “more than 1 million new cases of STIs occur in the world every day. Why should you still be unsure whether or not to use it and risk your health in this dangerous lottery?” seeks to make this consequence seem more important to the public. The same occurs in the 2020 campaign “Using condoms is everyone’s responsibility”. The 2019 campaign, “Without a condom, you take the risk”, uses the slogan “If seeing it is unpleasant, imagine catching it” to highlight the harm, or undesirability, of contracting an STI.

Regarding testing behavior, the consequence of knowing your status becomes important when the public recognizes the possibility of having contracted an STI. Thus, campaigns

such as “Hepatitis”, from 2017, highlight that people who had surgery before 1993 may have hepatitis C and not know it. The 2009 campaign of the “National Plan to Combat the AIDS and STD Epidemic among Gays, MSM and *Travestis*” reinforces that “if you have HIV, it is important to know as soon as possible.”

In general, messages that fall into the category of “Consequence Assessment” do so by highlighting everyone’s vulnerability to STIs, thus giving greater importance to prevention. Even so, it is possible to enhance the importance of consequences by highlighting outcomes such as treatment success. In the “Undetectable” campaign, in 2018, one of the testimonies stated: “Nowadays being undetectable is an achievement.”

The component of “Descriptive Norm” was observed in two ways: through information about the behavior of others and through representations of people who adopt preventive behaviors. Among the messages that provide data on the behavior of others, the situations of people unknowingly living with HIV and people who know they are living with HIV but are not yet on treatment stand out. These messages are present in the “Carnival” and “There are condoms in this party” campaigns, both from 2017. Such campaigns can contribute to the formation of a descriptive norm contrary to these behaviors, as they suggest that a large part of the population does not adhere to the suggested practices.

The acts of carrying condoms, testing, and immunization against some STIs are among the behaviors portrayed by characters in campaigns. In the 2017 “World Viral Hepatitis Day” campaign videos, for example, characters visit health facilities to get the hepatitis B vaccine and the hepatitis C test. These messages can contribute to the target population’s perception that the behavior being promoted is performed by several people, contributing to a favorable descriptive norm.

Additionally, some campaigns choose to present user testimonials to promote preventive behaviors. This approach

can both give greater authenticity to the messages and suggest the role of SUS users in the creation of campaigns. Different campaigns used this approach: “Undetectable” from 2018, “I am a travesti, I have the right to be who I am” from 2012, “International Women’s Day” and “Prevention for Sex Professionals”, both from 2013, use a similar approach.

Messages coded as “Injunctive Norm” focus on behaviors related to treatment, testing, and condom use. A significant part of the campaigns used service users, models, or people who presented characteristics of the target audience in the campaign, similar to the descriptive norm messages. An example of this strategy can be seen in the 2013 “International Women’s Day” campaign, which shows an invitation to be tested for Hepatitis B and C at the person’s next appointment, with a woman representing the campaign’s target audience.

Among the components of “Perceived Control” which were identified in the campaigns, the “Facilitators” of preventive behaviors stand out. Free access to treatment, testing, and access to condoms in the SUS are the most cited facilitators in the materials. In the case of testing, the speed of the procedure is also mentioned as a facilitator, although informational materials rarely distinguish between laboratory tests and rapid tests. Feeling welcome in health services was presented as a facilitator in HIV treatment, as in the case of the “Undetectable” campaign, from 2018, in which a statement describes how this welcoming is fundamental to favoring treatment adherence.

The “Barriers” were less represented in the campaigns. In this category, we found difficulties that can influence the decision to use condoms and barriers that may occur before and during the treatment of STIs. The Carnival campaign in 2014 features the phrases: “Be careful, alcohol can make you leave the condom aside.” and “It doesn’t matter the party, or where, or with whom. The important thing is to always use a condom.”

DISCUSSION

Carnival was one of the main dates for broadcasting the preventive campaigns included in this study. Large parties in Brazil, especially Carnival, are associated with a higher frequency of risky sexual behaviors, such as unprotected sex. The campaigns are publicized during these periods as a prevention strategy, in addition to the distribution of condoms to the population. Nevertheless, a study carried out in an STI health service in Niterói-RJ did not observe an increase in cases of Syphilis, Trichomoniasis, and Gonorrhea in the period immediately after Carnival in the years 1993 to 2005 (Passos et al., 2010). These data are in line with the pattern of campaign disclosure seen over the years. The authors suggest that the concentration of campaigns in this period can reinforce the stigmas of permissiveness present in large Brazilian parties. No information on campaigns broadcast

between 1993 and 2005 was reported in this study. If Carnival campaigns were produced in this period, it could be possible that the non-increase of STIs after Carnival is partly due to the existence of preventive campaigns.

The adoption of the Combination Prevention paradigm did not occur consistently in the communication campaigns analyzed. While the focus remains on behavioral strategies to encourage the use of external condoms, testing, and treatment, aspects such as harm reduction and combating discrimination are less constant. Moreover, they seem to have, over the years, less and less prominence in campaigns. This predilection for the behavioral aspects of Combination Prevention had already been observed by Lermen et al. (2019) in an analysis of posters from World AIDS Day campaigns between 2013 and 2017. As important as it is to promote

preventive behaviors and biomedical strategies to avoid the transmission of HIV and other STIs, there is no reason for campaigns to not address the social and structural aspects that contribute to vulnerability (Monteiro & Villela, 2019; Seffner & Parker, 2016).

Even among the biomedical strategies, Pre and Post Exposure Prophylaxis were rarely mentioned in the campaigns, in contrast to other prevention proposals. PEP has been available in Brazil since 2004, and its guidelines were extended to the use of the general population at risk of contamination with HIV in 2015 in the SUS (Ministério da Saúde/Secretaria de Ciência, Tecnologia e Insumos Estratégicos, 2015). PrEP became available through the SUS in 2018 and is indicated for people who are vulnerable to HIV. There was no mention of PEP/PrEP in the 2019 and 2020 campaigns when the focus was on condom use and testing. This absence of materials occurs after a change in the national Executive Power, marked by a conservative government elected with a campaign that criticized sex education initiatives and promoted a moralistic stance on STI prevention (Agostini et al., 2019; Barbosa Filho & Vieira, 2021). Among the measures taken after taking office, the merger of the Department of Surveillance, Prevention, and Control of STIs, AIDS, and Viral Hepatitis with the Department of Surveillance of Chronic Noncommunicable Diseases stands out, which reflects the lesser importance attributed to the prevention of STIs in the new management (Barbosa Filho & Vieira, 2021; Cazeiro et al., 2021).

The Ministry of Health recognizes that some specific populations differ in the way they are affected by HIV (Ministério da Saúde, 2017). Among key populations, gay men and men who have sex with men are often represented in campaigns. Although the 2008 “National Plan to Combat the AIDS and STD Epidemic among Gays, MSM and *Travestis*” campaign contained the colors of the LGBTQIA+ flag and messages such as: “It doesn’t matter what your (sexual orientation) is”, its materials do not address the specificities related to preventive behaviors in this population. Due to the advance in self-test technology, experiences in Brazil and abroad point to the possibility of promoting self-testing as an alternative for people who do not feel safe accessing health services (De Boni et al., 2019; Solorio et al., 2016).

The trans and *travesti* populations are disproportionately affected by HIV in Brazil and worldwide (Baral et al., 2013). Rocon et al. (2016) stress that much of the suffering and health problems that trans and *travesti* people face are caused or amplified by the prejudice suffered when these people seek health services. The expectation of being mistreated, such as when professionals refuse to use their social names, makes trans and *travesti* people avoid health services (Costa et al., 2018; Rocon et al., 2016). Between 2010 and 2013, records of campaigns focused on these populations were found. These materials addressed aspects of Combination Prevention, such as harm reduction and combating inequalities before this

paradigm was officially adopted. However, after 2013, there are no records of campaigns focused on the trans and *travesti* population, or that addressed relevant barriers and facilitators, as also noted by Lermen et al. (2019) in the analysis of the posters of the World AIDS Day campaigns. This observation is consistent with the process of political conservatism that has been restricting the scope of communication materials on sexuality (Monteiro & Villela, 2019).

In 2013, a campaign aimed specifically at sex workers was launched. The original campaign was vetoed by the Minister of Health for containing the phrase “I am happy being a prostitute” and reformulated to bring messages of adherence to condom use and information about STIs (Barbosa Filho & Vieira, 2021; Kerrigan et al., 2015), exemplifying how political pressure interfered in the communication of a campaign developed jointly with the population (Seffner & Parker, 2016). Fostering the role of sex workers in environments free from prejudice can improve the link between this population and health services, contributing to health care and well-being beyond the stigmas of the profession (Martins et al., 2018).

Alcohol consumption can increase the risk of STIs by making condom use more difficult (Baliunas et al., 2010; Berry & Johnson, 2018). The phrase “Be careful, alcohol and other drugs can make you give up condom use” appears only once in 2014, and this is the only time this information is explicitly mentioned. Throughout the campaigns, the situation “that’s how you catch it, that’s not how you catch it” presented the risk of transmission of STIs through the sharing of syringes and needles. However, there was no direct mention of drug use or harm reduction strategies. The lack of information in campaigns on the consumption of alcohol and other drugs may be a consequence of the existing stigmas on the subject, a fact that is not consistent with the approach proposed by Combination Prevention.

In addition to key populations, Combination Prevention is also organized around priority populations and population segments whose vulnerability to STIs stems from the impact of social structures. Priority is given to the black, young, indigenous, and homeless populations. There was no record of campaigns citing the specifics of the homeless, black, or indigenous population. In 2019 and 2020, campaigns focused on young people, due to epidemiological data which indicated an increase in STI cases in this population in Brazil. Campaigns are not the only strategy to combat stigma and its consequences in the concentration of STIs in these populations. Nevertheless, specificities that contribute to the reduction of stigma or improve the access of priority populations to health services were not mentioned. The needs of these populations must be addressed with a focus on reducing inequalities and building social equity. Care must be taken to ensure that stigmatized messages that connect STIs to priority populations are not associated. The last record of a campaign aimed at black people was in 2005 (Fry et al., 2007).

The analysis of the components of the Theory of Planned Behavior points to a greater investment in Attitude messages concerning behaviors, especially in the presentation of favorable consequences of performing the promoted behaviors. An Attitude-centered approach is in agreement with meta-analyses of studies on interventions based on the Theory of Planned Behavior, which presents Attitude as the main predictor of intention (Albarracín et al., 2001, 2005; Tyson et al., 2014). Furthermore, addressing the desirable consequences of preventive behaviors, rather than the undesirable consequences of not doing them, seems to be the best way to promote these behaviors. Contents that are threatening or that generate fear and discomfort were not associated with changes in Attitude or Intention (Albarracín et al., 2005). In fact, in some populations, these messages were associated with decreased condom use. A campaign carried out in Australia invested in humorous messages broadcast in traditional media to promote testing in men who have sex with men. The authors report that the messages were perceived as light and attractive, particularly by younger participants. At the same time, older participants expressed concern that the humorous tone might impair the perception of the seriousness of the subject (Pedrana et al., 2014). In the quantitative evaluation, an increase in testing was observed in the period during and after the campaign, but other factors may have influenced this process. Participants who were familiar with the campaign reported more testing for STIs (Pedrana et al., 2012). These results reinforce the guidelines of other studies on the need to customize the content of campaigns, but with care not to restrict the target audience too much (Albarracín et al., 2005; Lustria et al., 2013; Pedrana et al., 2014).

In general, the campaigns produced between 2008 and 2019 presented their content lightly and with a positive frame. Facilitators appeared more prominently

than barriers, as did the benefits of performing preventive behavior more than the associated risks. However, the most recent campaigns have changed their approach, by presenting aversive images and focusing on fear or repulsion as motivators for the adoption of preventive behaviors. Although none of the campaigns in the collection presents a theoretical basis to justify its implementation. This change goes against what the literature points out as more effective (Albarracín et al., 2005; Earl & Albarracín, 2007). The public seeks to avoid the unpleasant sensation of being faced with an aversive image or a message that generates fear and apprehension. One of the ways to avoid this feeling is to stop paying attention to the aversive message, which is harmful to the reach of the campaign. If the message is effectively conveyed, the induction of negative emotions can still have negative effects on the performance of preventive behaviors. Earl and Albarracín (2007) found that fear-based messages increased participants' perception of risk; however, they were also associated with less knowledge about STIs and less condom use after the intervention. Therefore, the change in the approach of campaigns from 2019 onwards is questionable, particularly due to the lack of theoretical basis and evaluation of the effect of these campaigns.

The present study only included communication campaigns archived in the online collection of the Ministry of Health. Throughout the collection, inconsistencies were noted in the storage of materials. Some campaigns have more files of different types, while others had no files available for evaluation. Thus, one of the limitations of this study is the restricted scope of the analysis of the campaigns present in this collection. They certainly do not represent all the STI prevention campaigns developed in Brazil in this period, as they do not include campaigns promoted by other spheres of government. Likewise, they do not necessarily represent the integrity of the available campaigns.

FINAL CONSIDERATIONS

The importance of large-scale prevention campaigns is based on their potential to reach a significant portion of the target population at a much lower cost than face-to-face approaches. However, research in the area suggests that this effect does not always occur as planned (Albarracín et al., 2005; Noar, 2006). The promoters of these campaigns should consider the target campaign audience, how best to reach them, and how to address the social, emotional, and cognitive aspects that affect the adoption (or non-adoption) of preventive behaviors (Lustria et al., 2013; Pedrana et al., 2012, 2014). Therefore, basing campaigns on theories of Health Psychology and related areas is a way to facilitate their development and evaluation (Noar, 2006; Simoni et al., 2018).

A decrease in the number of campaigns registered in recent years was observed, as well as a more restricted thematic

scope and a regression in the use of aversive representations in campaign materials. Such changes reflect the trajectory of increase in conservatism that has occurred in recent decades, materialized in the Executive Branch during the term of President Jair Bolsonaro (Agostini et al., 2019; Barbosa Filho & Vieira, 2021).

Future studies can use the materials from the digital collection to test the effects of messages on the corresponding components of the Theory of Planned Behavior and the adoption of preventive behaviors. This evaluation is important insofar as it can guide the continued use of materials considered effective or suggest changes in materials that do not affect the target audience's motivation to carry out preventive behaviors as expected.

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