



# Rendering visible heterosexually active men in Brazil: A national study on sexual behaviour, masculinities and HIV risk

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## Abstract

The HIV epidemic has not spread widely among heterosexuals in countries with medium to high per capita income rates. To understand this phenomenon in Brazil, this article analyses data from a national survey to distinguish groups of heterosexually active men in relation to their risk of infection. The analysis used an odds ratio to estimate the chance of belonging to the group of greatest risk and factor analysis to understand patterns of masculinity. It was found that a pattern of restricted sexual behaviour (having a stable partner, a relatively reduced sexual network and infrequent extraconjugal activities) limited the spread of HIV. Fewer than 1 in 10 of men presented great risk of infection. The odds of belonging to this group rose according to sexual characteristics and cultural values. Men presenting a pattern of masculinity that showed

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satisfaction with one's sexuality were 2.3 times more likely to belong to the group at great risk, while a pattern of physical self-care and attention to one's health reduced such a risk. The study therefore shows that heterosexual men are not a homogeneous group. Gender norms influence the risk of HIV infection and a small portion of men should be considered within preventative policies.

### **Keywords**

Gender, heterosexual active men, HIV/AIDS, masculinities, sexual behaviour

### **Introduction**

Although low rates of HIV infection among the general population have at times led to misconceptions about how heterosexuals are in actuality affected by the epidemic (Carnegie and Morris, 2012; Gilbert et al., 2006), HIV among heterosexuals remains a global challenge. These misconceptions have contributed to the underestimation of the risks of transmission of HIV among heterosexual men, as well as to health policies overlooking this part of the population in their prevention strategies (Leal et al., 2015; Townsend et al., 2013). Efforts to identify, quantify and describe segments of the heterosexual male population with the greatest exposure to HIV are therefore increasingly important (DiNenno et al., 2012; Dworkin, 2015) in the fields of the social sciences and public health.

In Brazil, studies show that HIV transmission through heterosexual relations has grown to epidemic proportions in more urbanized cities with greater concentrations of wealth, especially when associated with other forms of HIV transmission, particularly injectable drug use (Grangeiro et al., 2010). Despite its relevance, few studies in the country have prioritized knowledge about the HIV epidemic among heterosexual men in population surveys, and usually limit their scope to populations whose vulnerability is unrelated to heterosexuality, such as crack users and prisoners (Leal et al., 2015), or to generational segments like 'youth' (Pulerwitz and Barker, 2008).

The central role played by gender in studies of vulnerability to and prevention of HIV is currently so widely recognized that it has been termed a 'gendered epidemic' (Mane and Aggleton, 2001).

Empirical studies and conceptual debates on masculinities, based on a constructivist, relational and feminist perspective on gender, with a later ingression of said content into studies within the field of public health, reveal two important concepts: first, there is no such thing as a single, monolithic 'masculinity'; second, masculinities can change (Connell, 2014). These two arguments may seem trivial but they are important points to understand within the field of sexuality as they serve to acknowledge that gender norms play an important role in shaping sexual behaviour, contributing to the understanding of masculine practices in the context of an intricate process of socialization and identity formation (Fleming et al., 2016). The recognition of this plurality within the heterosexual male population is especially relevant to the development of applied knowledge. A new research agenda in the field of public health, for instance, helped initiate a move away

from using a generic notion of 'man' as a prevailing category in biomedical studies, to searching for different ways men can exercise their masculinity and how this relates to the processes of health, sickness and care (Connell, 2012).

We ascribe here to a perspective of gender that defines masculinity as socially constructed and deployed in situations of agency as well as constraint (by race, class, generation and more), and as shifting over time and place (Dworkin, 2015). 'Masculinity' and 'femininity' do not necessarily coincide with men and women; rather, they are metaphors of power and capacity for action that both men and women may draw upon, making various 'masculinities'/'femininities' possible (Connell, 2014).

The concept of hegemonic masculinity, one of the most debated in the theoretical production of masculinities and broadly used in public health and sociological studies on HIV/AIDS, takes into account patterns that assure the dominance of men and the subordination of women; it does not necessarily refer to more powerful people but rather to a type of masculinity that is held to be exemplary. Masculinity, therefore, like femininity, will always be associated with internal contradictions and historic ruptures.

Recent studies seek to understand and evaluate the extent of contemporary transformations within the configurations of styles of masculinities. The concept of 'hybrid masculinities refers to the selective incorporation of elements of identity typically associated with various marginalized and subordinated masculinities and – at times – femininities into privileged men's gender performances and identities' (Bridges and Pascoe, 2014: 246). Analyses focused on hybrid masculinities seek to understand the discourse on the difference among segments of men in relation to the hegemonic standard, meanwhile including the impact that the practices of hybrid masculinities have on the maintenance of privilege and gender, sexual and racial inequalities (Bridges and Pascoe, 2014).

Brazilian literature on the subject within the social sciences, expressly qualitative in nature, produced in the last 20 years and based strongly on a constructivist, feminist perspective on gender, has highlighted the variety of ways in which one can perform masculinity in the country. While the theoretical approach on masculinities focuses on processes and practices and refers to authors such as Connell, Kimmel and Almeida, at times the exercises of masculinities, as Schrock and Schwalbe (2009) verify in the international literature, are researched based on markers of race, class, sexual orientation and generation. Although this tendency is beneficial in showing the multiplicity of masculinities, it can limit the scope of comprehension of intra-group variations and hinder the understanding of what these groups have in common in regard to their acts of manhood.

Brazilian masculinities, as demonstrated in the literature, make up a complex set of repertoires that express the tension between conservative and progressive forms of manhood. Different repertoires of masculinity regarding issues such as gender-based violence, parenting, sexism and gender equality appear in national studies. Couto and Schraiber (2013) show that notions that affirm virility and honour – such as being a 'real man' – remain prevalent traits of masculinity throughout the country. Meanwhile, the expression of subordinate and marginalized masculinities that fight for recognition and rights, and even those who ascribe to hegemonic masculinity that position themselves in favour of more horizontal relationships with other men and with women, signal the presence of social changes underway. Ruptures in the opposition that historically holds men

in public spaces and women in the private sphere, be it from the increase in men's participation in parenting and/or the acknowledgement that women in the last decades have gained space in sectors such as politics and the job market, also allow a glimpse into the social transformations in progress (Venturi and Godinho, 2013).

In Brazil, as well as internationally, studies on male sexual behaviour and HIV prevention often allude to prevailing norms of masculinity related to the expectation that men are better informed and more experienced in sexual matters, which sometimes makes it difficult for men to admit ignorance or seek out information (Dworkin, 2015; Fleming et al., 2016; Gomes, 2011). This male insecurity, especially among young men, may render them more vulnerable to HIV (Gupta, 2000). In an attempt to understand the patterns of men's sexual behaviour, studies emphasize masculine socialization as the underlying sociocultural cause of men's sense of self-sufficiency and their refusal to seek help when needed, thus creating a sense of invulnerability. Paradoxically, these attitudes leave them more vulnerable and tend to lead to sexual behaviour that puts them at risk of HIV and other diseases (Courtenay, 2000; Mane and Aggleton, 2001).

Examining research focused on the relationship between men and women in the field of the HIV/AIDS epidemic, we find that heterosexual men were ignored, either by being relegated to a secondary role in the studied population or by being rendered invisible as a target group for the interventions proposed to cope with the epidemic. These aspects have only begun to be reconsidered in the past decade. Recent reviews of the literature have questioned the motives and effects of the invisibility and sidelining of heterosexual men in the AIDS epidemic (Fleming et al., 2016; Higgins et al., 2010; Leal et al., 2015). Leal et al. (2015) note that when heterosexual men are present in studies, they tend to be subsumed under the terms 'general population' and 'drug users' and, indirectly, in interventions aimed at women. Occasionally heterosexual men have been included in Brazilian studies that focus on traditionally 'masculine' occupations, such as truck drivers or soldiers. Higgins et al. (2010) believe the invisibility of heterosexual men and of the diversity within this segment of the population is due in large part to the fact that as the epidemic spread, they were seen as HIV transmitters but not as active agents in the field of prevention.

Conversely, the comprehensive review undertaken by Fleming et al. (2016) notes that empirical studies conducted over the past decade on all continents and in a variety of social and age groups have tended to look for relationships between the norms of masculinity and behaviours associated with the risk of HIV, especially the failure to use condoms and engaging in sexual relations with a large number of partners. The authors underscore that despite this focus, these empirical studies offer little in the way of a consistent explanation about which aspects of the norms lead men to engage in behaviours that put themselves and their partners at risk. Dworkin (2015) points out that the omission of male vulnerability to HIV/AIDS was even more noticeable in the epidemiological literature than in the social sciences. For her, until mid-2000 the field of public health focused more on analyses of gender predominantly based on heterosexuality than on the diversity of masculinities. Only subsequently to this has an intersectional perspective been incorporated that considers the oppressions of heterosexual Black and poor men that leave them vulnerable to HIV.

In summary, despite the relevance of theoretical approaches that consider gender and masculinity in terms of their intersection with other social markers and focus on the position of subjects in relation to social structures, discussions of gender and AIDS continue to reproduce vague stereotypes about masculinity, especially with respect to heterosexuals, failing to acknowledge distinctions among norms of masculinity and the extent to which subjects conform to or resist them (Dworkin, 2015; Higgins et al., 2010; Leal et al., 2015; Mane and Aggleton, 2001).

There is a clear tendency to treat heterosexual men as a homogeneous group in HIV research, which subsequently glosses over and obscures their different modes of living and practising masculinities. We therefore chose to focus on heterosexually active Brazilian men in order to examine more closely their sexual behaviour and their patterns of masculinity so as to use these markers to identify and describe, among this population, those who are at greatest risk of contracting HIV. We use the perspective of gender and masculinities to better understand the interrelationship between the diversity within the heterosexual male population and the dynamics of the HIV epidemic in contexts such as Brazil, where the infection rate among the general population is low.

## **Methodology**

### *Population, sampling and data collection*

The study analysed a sample of heterosexually active Brazilian men over the age of 15 living in urban and rural areas through a household survey conducted in 2010 (Venturi and Godinho, 2013). The sampling process consisted of five stages, the first four of which were probabilistic. Initial samples were selected randomly by (1) cities, (2) census districts, (3) blocks and (4) households. In the final stage, individuals within each household (one per household) were chosen based on an age quota in order to reflect the age distribution among the general population of Brazilian men. The selected individuals were randomly distributed into two sub-samples and answered questions in one of two partly different questionnaires (split-ballot technique), A and B. Each questionnaire contained approximately 85 questions, administered via face-to-face interviews conducted by male interviewers.

This study considers the subjects who answered Questionnaire A, which contained specific questions about sexuality and sexual behaviour. This sub-sample was comprised of 552 men who reported having sexual relations exclusively with women, spread among 104 small, medium and large cities of Brazil's five macro-regions. The study excluded 27 individuals who declared themselves heterosexuals but reported never having had sexual relations.

The research protocol was approved by the Ethics Committee of the School of Medicine of the University of São Paulo under protocol number 428/15.

### *Sexual behaviour, masculinities and risk of HIV infection*

Data about the type of sexual partner and the use of condoms in respondents' most recent sexual relation were gathered. Respondents were considered to be in a stable

relationship if they reported that their most recent sexual relation had been with their spouse, civil union partner or girlfriend; friends, acquaintances, strangers, lovers and professional sex workers were classified as casual partners. Men were considered to have had an 'outside relationship' if they reported their most recent sexual encounter being with a casual partner and described themselves as married, living together with a partner or having a girlfriend.

Attributes of masculinity were put together using variables that express the way men, regardless of their place within the social structure and their sexual practices, reported their satisfaction in regard to themselves, their position in society and their sexual relationships, and their perception of women's place in society. In using one's satisfaction as a reference of analysis we consider that, for heterosexual men, the ways in which one experiences being a man allow for more accurate explanations of what aspects of one's daily life would lead to the exposure to HIV.

The degree of contentment with attributes of masculinity was measured by having each subject rate his satisfaction with each aspect on a scale of 1 to 5 in response to the question 'Would you say you are satisfied or dissatisfied with: your health; your physical appearance; the way you spend your free time; your ability to make decisions; your love life; your family; the way you experience your sexuality?' Perceptions about women's place in society were assessed via three questions: whether relations between men and women are better, worse or unchanged compared to 20 or 30 years ago; whether there are more advantages or disadvantages to being a man than a woman; and whether the respondent considers himself sexist.

The risk of HIV infection was assessed based on the assumption that individuals who used condoms during their most recent sexual relation, regardless of the type of partner, were exposed to minimal risk and classified as a 'negligible risk' group. Those who did not use condoms in a stable relationship but had been tested for HIV in the previous 12 months were also considered of 'negligible risk', whereas those who did not use condoms in a stable relationship and had not been tested for HIV in the previous 12 months were considered 'at risk'. Those who had relations with a casual partner without using condoms were considered 'at great risk'.

### *Statistical analysis*

Respondents' sexual behaviour and their use of HIV prophylactics were described through sociodemographic characteristics using means and prevalence. Relations among characteristics were then analysed using the chi-squared test. When a relation was found to be significant (i.e. with values of  $p < 0.05$ ), a standardized residuals test (Zres) was applied, assuming values above  $|1.96|$  to be nonstandard. Analysis of variance (ANOVA) was employed for continuous variables, using Bonferroni's method to test multiple differences among means.

Attributes of masculinity were analysed using principal component analysis. The data matrix was evaluated using the Kaiser–Meyer–Olkin (KMO) criterion, resulting in a value of 0.7 (Hutcheson and Sofroniou, 1999). The number of retained factors was defined with relation to the inflection of the curve shown on the screen plot of the eigenvalues. The factor loadings were analysed after oblique rotation, assuming the patterns

(factors) to be correlated. Items with a load of 0.25 or greater were considered part of a certain pattern. The mean of the factor scores calculated for each study participant using the retained pattern was analysed in terms of sociodemographic characteristics and sexual behaviour using ANOVA and Bonferroni's method.

The odds ratio (OR) was used as the effects size, with a confidence interval of 95% (CI95%), calculated through logistic regression in order to analyse the chance of belonging to the group of individuals at great risk of infection. For the purposes of this study, individuals in the 'negligible risk' and 'at risk' groups were combined into a single category. Attributes related to masculinity, sociodemographic characteristics and sexual behaviour were analysed and remained in the final model when they showed a *p* value less than 0.05, with the exception of income data, which remained as a goodness-of-fit variable.

## Results

### *Sexual behaviour and HIV prevention among heterosexually active men*

The heterosexually active Brazilian man aged 15 or older who has begun his sex life is, on average, 39.8 years old, married (65.1%), describes himself as Catholic (65.5%), lives in a metropolitan area (36.7%) or a city of more than 500,000 inhabitants (20.4%), and lives on a monthly household income of no more than five times the minimum wage (80.9%), which is equivalent to US\$1441.00 per month. His first sexual relation occurred, on average, at the age of 15.8, which for the majority of respondents (61.4%) occurred after the HIV epidemic appeared in Brazil in 1983 (Table 1).

He has been sexually active for an average of 23.6 years (median 21; IQR 11–34), with a mean of 22.5 sexual partners over his lifetime (median 10; IQR 4.4–30). For 71.9% of the respondents, the most recent sexual relation had occurred within the previous 7 days, primarily with a stable partner (80.7%) such as a wife (67.1%) or girlfriend (13.6%). For 12.8% of the men, the most recent encounter had been with a friend, and for 6.4% of the respondents, it was with a lover, sex worker or stranger. A total of 31.9% of the men reported using condoms during their most recent sexual relation, which varied from 22.1% of those with stable partners to 69.9% of those with casual partners. Of the 36.2% of the respondents who reported having taken an HIV test, almost one-half of them (18%) had been tested during the previous 12 months.

The most significant variations in the sexual profiles of heterosexually active men were related to age and marital status (Table 1). Age of the first sexual experience fell below 16 years only among the generations born in the 1970s and later. Additionally, it was among the generations born since 1990 and among single/separated men that respondents most frequently reported having casual partners (43.4% and 51.6%, respectively), having the most recent relation more than 7 days ago (40.4% and 32.6%), and having used condoms (80.1% and 63.5%). Among men who were married or living with their partner, 4.0% reported having had their most recent relation with a casual partner, which for the purposes of this study is characterized as an 'outside' encounter. Other demographic characteristics, such as household income, the size of the city in which the respondent lived and religious affiliation, did little to differentiate heterosexually active

**Table 1.** Sociodemographic characteristics and sexual behaviour of heterosexually active Brazilian men.

| Sociodemographic characteristics           | Age at first sexual relation | Number of partners over lifetime | Type of partner in most recent relation |                   | Number of days since most recent relation |                   |                   | Use of condom during most recent relation | Ever tested for HIV | Tested for HIV during past year | Total             |      |
|--|------------------------------|----------------------------------|---|-------------------|---|-------------------|-------------------|---|---------------------|---------------------------------|-------------------|------|
|  | Average                      | Average                          | Stable                                  | Casual            | 7 or fewer                                | 8-30              | 31-365            | >365                                      | %                   | %                               | %                 |      |
| <b>Size of city (inhabitants)</b>          |                              |                                  |   |                   |   |                   |                   |   |                     |                                 |                   |      |
| <100,000                                   | 16.1                         | 16.7                             | 87.4                                    | 12.6              | 79.2                                      | 11.1              | 5.7               | 4.0                                       | 25.2                | 21.6                            | 13.7              | 20.9 |
| 100,000-500,000                            | 16.5 <sup>b</sup>            | 17.8                             | 78.9                                    | 21.1              | 63.3                                      | 27.0 <sup>a</sup> | 4.6               | 5.1                                       | 29.5                | 33.1                            | 14.6              | 22.0 |
| >500,000                                   | 15.8                         | 20.2                             | 80.7                                    | 19.3              | 78.6                                      | 8.3               | 8.5               | 4.5                                       | 38                  | 37.8                            | 15.5              | 20.4 |
| Metropolitan areas and capital cities      | 15.4 <sup>b</sup>            | 30.3                             | 78.0                                    | 22.0              | 69.4                                      | 17.6              | 9.8               | 3.3                                       | 33.8                | 45.6a                           | 24.0 <sup>a</sup> | 36.7 |
| <b>Decade of birth</b>                     |                              |                                  |   |                   |   |                   |                   |   |                     |                                 |                   |      |
| 1922-1939                                  | 17.9 <sup>c</sup>            | 34.0                             | 91.1                                    | 8.9               | 13.0                                      | 25.1              | 37.6 <sup>a</sup> | 24.4 <sup>a</sup>                         | -                   | 4.4                             | -                 | 3.9  |
| 1940-1949                                  | 16.8 <sup>c</sup>            | 16.4                             | 84.0                                    | 16.0              | 58.2                                      | 17.0              | 12.0              | 12.8 <sup>a</sup>                         | 13.5                | 20.5                            | 9.0               | 8.3  |
| 1950-1959                                  | 16.2                         | 31.9                             | 83.1                                    | 16.9              | 75.8                                      | 14.6              | 6.4               | 3.2                                       | 23.7                | 30.0                            | 18.6              | 12.1 |
| 1960-1969                                  | 16.5 <sup>c</sup>            | 29.0                             | 85.0                                    | 15.0              | 83.0 <sup>a</sup>                         | 11.9              | 1.9               | 3.2                                       | 15.6                | 42.1                            | 18.7              | 17.3 |
| 1970-1979                                  | 15.7 <sup>c</sup>            | 17.9                             | 87.6 <sup>a</sup>                       | 12.4              | 81.7 <sup>a</sup>                         | 9.8               | 7.0               | 1.4                                       | 30.0                | 52.1 <sup>a</sup>               | 23.1              | 23.6 |
| 1980-1989                                  | 15.2 <sup>c</sup>            | 24.1                             | 77.0                                    | 23.0              | 80.5 <sup>a</sup>                         | 14.3              | 1.7               | 3.5                                       | 39.7                | 40.2                            | 23.8              | 19.9 |
| 1990-1995                                  | 14.7 <sup>c</sup>            | 11.5                             | 56.6                                    | 43.4 <sup>b</sup> | 39.2                                      | 40.4 <sup>b</sup> | 18.7 <sup>a</sup> | 1.7                                       | 80.1 <sup>a</sup>   | 16.1                            | 10.8              | 14.9 |
| <b>Marital status</b>                      |                              |                                  |   |                   |   |                   |                   |   |                     |                                 |                   |      |
| Married or living w/ partner               | 16.0 <sup>b</sup>            | 20.6                             | 95.9 <sup>a</sup>                       | 4.1               | 84.7 <sup>a</sup>                         | 8.9               | 4.1               | 2.3                                       | 18.0                | 37.6                            | 19.1              | 65.1 |
| Single or separated                        | 15.4 <sup>b</sup>            | 23.0                             | 48.4                                    | 51.6 <sup>a</sup> | 46.3                                      | 32.6 <sup>a</sup> | 15.5 <sup>a</sup> | 5.6                                       | 63.5 <sup>a</sup>   | 33.7                            | 16.5              | 32.8 |
| Widowed                                    | 16.4                         | 76.1 <sup>d</sup>                | 40.7                                    | 59.3 <sup>b</sup> | 40.0                                      | 18.4              | 3.6               | 38.0 <sup>b</sup>                         | 26.6                | 27.8                            | 10.1              | 2.1  |
| <b>Household income (in minimum wages)</b> |                              |                                  |   |                   |   |                   |                   |   |                     |                                 |                   |      |
| Up to 2                                    | 16.1                         | 23.8                             | 82.0                                    | 18.0              | 70.7                                      | 18.2              | 6.0               | 5.1                                       | 33.1                | 27.6                            | 12.5              | 43.5 |
| >2 to 5                                    | 15.6                         | 24.3                             | 80.9                                    | 19.1              | 74.0                                      | 14.0              | 8.5               | 3.5                                       | 29.3                | 39.4                            | 21.1              | 37.4 |
| >5   | 15.7                         | 20.6                             | 78.4                                    | 21.6              | 74.1                                      | 16.2              | 7.6               | 2.2                                       | 28.1                | 49.3 <sup>a</sup>               | 23.4              | 19.1 |
| <b>Religious affiliation</b>               |                              |                                  |   |                   |   |                   |                   |   |                     |                                 |                   |      |
| Catholic                                   | 16.1 <sup>b</sup>            | 21.0                             | 82.3                                    | 17.7              | 74.0                                      | 16.1              | 6.8               | 3.3                                       | 29.8                | 31.3                            | 16.7              | 65.5 |
| Evangelical (Protestant)                   | 15.7                         | 17.8                             | 83.4                                    | 16.6              | 73.2                                      | 14.5              | 6.2               | 6.1                                       | 30.9                | 50.5 <sup>a</sup>               | 24.6              | 18.8 |
| Other                                      | 15.4                         | 25.6                             | 71.8                                    | 28.2              | 54.3                                      | 19.5              | 20.0              | 6.4                                       | 34.4                | 42.4                            | 22.5              | 5.9  |
| Atheist or no affiliation                  | 14.8 <sup>b</sup>            | 39.5                             | 71.4                                    | 28.6              | 66.9                                      | 20.1              | 9.3               | 3.7                                       | 45.8                | 38.0                            | 11.6              | 9.8  |
| <b>Total</b>                               | 15.8                         | 22.7                             | 80.7                                    | 19.3              | 71.9                                      | 16.4              | 7.6               | 4.1                                       | 31.9                | 36.2                            | 18.0              | -    |

<sup>a</sup>p <0.05; residual analysis (Z<sub>res</sub>) > 1.96.

<sup>b</sup>p <0.05; Bonferroni test indicating difference among categories.

<sup>c</sup>p <0.05; Bonferroni test indicating difference between 1922-39 and 1970-95; between 1940 and 1980-95; and between 1960 and 1980-95.

<sup>d</sup>p <0.05; Bonferroni test indicating differences between married and single categories.



men's profiles, with the exception of residents of larger cities and those who declared themselves atheists or without religious affiliation; these men were more likely to have begun sexual activity earlier (at average age of 15.4 and 14.8 years old, respectively).

### *Attributes of masculinity*

The three patterns of masculinity established through the analysis of attributes (Table 2) explained 47% of the variance in the data analysed. The first pattern, which explained 23% of the variance, was termed 'self-satisfaction' and combined items that demonstrated greater satisfaction with health, physical appearance, decision-making ability and use of free time. This pattern was not distinguished by any of the sociodemographic characteristics or sexual behaviours analysed (Table 3).

The second pattern, labelled 'relational', that brought together items indicative of greater satisfaction with love, family and sex life, explained 13% of the variance. It is worth emphasizing that this pattern brought together items that achieved the highest frequency of satisfaction among the attributes analysed and stood out from the other patterns as being more closely identified with single, separated and widowed men, those born between 1990 and 1995, atheists or those without a religious affiliation, those whose most recent sexual relation had occurred between 7 and 365 days ago, and those who had a casual partner.

The third pattern, termed 'societal', combined items that assessed gender relations, including the statement that there are more advantages to being a man than to being a woman and the statement that relations between men and women have remained unchanged over the past several decades. This pattern indicated greater satisfaction with family life and the respondent's ability to make decisions. This pattern explained 11% of the variance. It was also unrelated to the sociodemographic characteristics studied.

A total of 26.4% of heterosexually active men described themselves as sexist. This attribute did not load in any of the established patterns (Table 2).

### *Risk of HIV infection*

More than one-half of the heterosexually active men interviewed (57.8%) reported behaviour that put them at some risk of HIV infection from their most recent sexual relation (Table 4). In the majority of cases (51.9%), this behaviour consisted of not having used condoms in a stable relationship and not having been tested for HIV within the past 12 months. Great risk was observed in the 5.9% of men who had not used condoms in a casual sexual relation.

The chance of belonging to the group at great risk (Table 5) increased in relation to sexual behaviour, sociodemographic characteristics and masculinity attributes. Thus, the greatest chance of belonging to the great-risk group was observed among men who had a relation 'outside' their stable relationship (OR 7.25; CI95% 1.76–29.79); were atheists or had no religious affiliation (OR 4.00; CI95% 1.01–15.85); identified more closely with the 'relational pattern' of masculinity (OR 2.30; CI95% 1.63–3.25); were older (OR 1.37; CI95% 1.07–1.74); and had more sexual partners over their lifetimes (OR 1.01; CI95% 1.00–1.01). In contrast, the chance of not belonging to the great-risk group was

**Table 2.** Attributes and factor loadings of the patterns<sup>a</sup> of masculinities of heterosexually active Brazilian men.

| Attributes  | %                 | Patterns of masculinities   |                             |                             |
|---|-------------------|-----------------------------|-----------------------------|-----------------------------|
|   |                   | Self-satisfaction           | Relational                  | Societal                    |
|   |                   | (explains 23%) <sup>b</sup> | (explains 13%) <sup>b</sup> | (explains 11%) <sup>b</sup> |
| Physical health   | 68.9 <sup>c</sup> | <b>0.927</b>                | -0.160                      | -0.093                      |
| Physical appearance                                     | 70.5 <sup>c</sup> | <b>0.754</b>                | 0.100                       | -0.011                      |
| Decision-making ability                                 | 74.6 <sup>c</sup> | <b>0.416</b>                | 0.146                       | <b>0.347</b>                |
| Free time   | 62.7 <sup>c</sup> | <b>0.266</b>                | 0.234                       | 0.002                       |
| Love  | 72.4 <sup>c</sup> | -0.084                      | <b>0.857</b>                | -0.001                      |
| Sex life  | 82.8 <sup>c</sup> | 0.017                       | <b>0.703</b>                | -0.232                      |
| Family  | 84.1 <sup>c</sup> | -0.065                      | <b>0.517</b>                | <b>0.374</b>                |
| Relations between men and women same as 20–30 years ago | 42.2 <sup>d</sup> | -0.197                      | 0.038                       | <b>0.739</b>                |
| More advantages to being a man                          | 70.4 <sup>d</sup> | 0.092                       | -0.174                      | <b>0.722</b>                |
| Considers himself sexist <sup>a</sup>                   | 26.4              | 0.008                       | 0.139                       | -0.123                      |

<sup>a</sup>Patterns obtained through principal component analysis with factor loadings generated after rotation.

<sup>b</sup>Proportion of variance explained by the pattern.

<sup>c</sup>Proportion of individuals completely satisfied with the attribute.

<sup>d</sup>Proportion of individuals who agreed with the statement.

greatest among men who identified with the ‘self-satisfaction pattern’ of masculinity (OR 0.59; CI95% 0.38–0.91); those whose first sexual relation had occurred at an older age (OR 0.71; CI95% 0.53–0.96); and those who had been sexually active for longer periods of time (OR 0.73; CI95% 0.57–0.93).

The length of time since the most recent relation, whether the respondent described himself as sexist, identification with the ‘societal pattern’ of masculinity, household income and city of residence did not influence the respondent’s chances of belonging to the great-risk group.

## Discussion

The study shows that heterosexually active Brazilian men are potentially exposed to HIV in varying degrees of risk, with a small portion – fewer than 1 in 10 – exposed to great risk of HIV infection during their most recent sexual encounter, whereas the majority – more than 9 out of 10 – had been exposed to a negligible amount of risk or could have been exposed only through sexual relations with their wife, cohabiting partner or girlfriend.

These characteristics, together with the low prevalence of factors that accelerate the spread of HIV in a society (Carnegie and Morris, 2012), such as large networks of sexual partners and frequent relations ‘outside’ stable partnerships (Dworkin, 2015), may help to explain why the epidemic has remained limited to certain social segments and affects less than 1% of the population in Brazil. In addition to sexual behaviour, the chance of belonging to the ‘at great risk’ group was influenced by cultural values and masculine attributes.

**Table 3.** Demographic characteristics and sexual behaviour of heterosexually active Brazilian men by patterns of masculinity.

| Characteristics                               | Average patterns of satisfaction with attributes of masculinities |              |                     |                  |              |
|---|---|--------------|---------------------|------------------|--------------|
|   | Self-satisfaction   | <i>p</i>     | Relational          | <i>p</i>         | Societal     |
|   | Average   |              | Average             |                  | Average      |
| <b>Marital status</b>                         |   | <i>0.427</i> |                     | <i>&lt;0.001</i> | <i>0.086</i> |
| Married or living w/ partner                  | 0.006   |              | -0.281 <sup>a</sup> |                  | 0.068        |
| Single or separated                           | -0.003  |              | 0.542 <sup>a</sup>  |                  | -0.174       |
| Widowed                                       | -0.363  |              | 0.484 <sup>a</sup>  |                  | 0.210        |
| <b>Decade of birth</b>                        |   | <i>0.672</i> |                     | <i>0.004</i>     | <i>0.148</i> |
| 1922–1939                                     | 0.038   |              | -0.078              |                  | -0.146       |
| 1940–1949                                     | -0.135  |              | -0.113              |                  | 0.232        |
| 1950–1959                                     | 0.146   |              | -0.098              |                  | 0.215        |
| 1960–1969                                     | -0.119  |              | -0.201 <sup>a</sup> |                  | 0.125        |
| 1970–1979                                     | 0.065   |              | -0.033 <sup>a</sup> |                  | -0.061       |
| 1980–1989                                     | 0.005   |              | 0.017               |                  | -0.049       |
| 1990–1995                                     | -0.064  |              | 0.428 <sup>a</sup>  |                  | -0.293       |
| <b>Religious affiliation</b>                  |   | <i>0.175</i> |                     | <i>0.003</i>     | <i>0.738</i> |
| Catholic                                      | -0.016  |              | -0.120 <sup>a</sup> |                  | 0.021        |
| Evangelical (Protestant)                      | -0.084  |              | 0.124               |                  | -0.007       |
| Other   | 0.326   |              | 0.226               |                  | -0.194       |
| Atheist or no affiliation                     | 0.022   |              | 0.376 <sup>a</sup>  |                  | -0.062       |
| <b>Age at first sexual relation</b>           |   | <i>0.825</i> |                     | <i>0.260</i>     | <i>0.428</i> |
| 1st tertile (10–15 years)                     | -0.004  |              | 0.069               |                  | -0.076       |
| 2nd tertile (16–17 years)                     | -0.081  |              | -0.094              |                  | 0.140        |
| 3rd tertile (18–36 years)                     | 0.031   |              | -0.072              |                  | 0.088        |
| <b>Number of partners in lifetime</b>         |   | <i>0.696</i> |                     | <i>0.092</i>     | <i>0.062</i> |
| 1st tertile (1–5 partners)                    | -0.047  |              | -0.098              |                  | -0.141       |
| 2nd tertile (6–15 partners)                   | -0.006  |              | -0.022              |                  | 0.149        |
| 3rd tertile (16–500 partners)                 | 0.072   |              | 0.184               |                  | 0.089        |
| <b>Partner in most recent relation</b>        |   | <i>0.986</i> |                     | <i>&lt;0.001</i> | <i>0.649</i> |
| Stable  | -0.015  |              | -0.157              |                  | 0.028        |
| Casual  | 0.011   |              | 0.526               |                  | -0.045       |
| <b>Time since most recent relation (days)</b> |   | <i>0.436</i> |                     | <i>&lt;0.001</i> | <i>0.184</i> |
| 7 or fewer                                    | -0.032  |              | -0.172 <sup>a</sup> |                  | -0.008       |
| 8–30  | 0.030   |              | 0.297 <sup>a</sup>  |                  | 0.164        |
| 31–365  | 0.198   |              | 0.671 <sup>a</sup>  |                  | -0.245       |
| >365  | 0.027   |              | 0.193               |                  | -0.012       |
| <b>Total</b>                                  | -0.005  |              | -0.003              |                  | -0.005       |

<sup>a</sup>Bonferroni's test indicating differences between single/widowed and married; between those born 1990–95 and those born in 1960s and 1970s; between atheists and Catholics; and between those whose most recent relation occurred in the past seven days and those whose most recent relation occurred 7–365 days ago.

**Table 4.** Risk of HIV infection in heterosexually active Brazilian men.

| Risk of infection                                | N          | %           |
|--|------------|-------------|
| <b>Negligible risk</b>                           | <b>232</b> | <b>42.1</b> |
| <i>Stable partner</i>                            |            |             |
| With condom or tested for HIV in past year       | 158        | 28.8        |
| <i>Casual partner</i>                            |            |             |
| With condoms                                     | 74         | 13.4        |
| <b>At risk</b>                                   | <b>286</b> | <b>51.9</b> |
| <i>Stable partner</i>                            |            |             |
| Without condoms, not tested for HIV in past year | 286        | 51.9        |
| <b>Great risk</b>                                | <b>33</b>  | <b>5.9</b>  |
| <i>Casual partner</i>                            |            |             |
| Without condoms                                  | 33         | 5.9         |

**Table 5.** Chance (odds ratio – OR) of belonging to the group at greater risk of HIV infection in the sexual behaviour of heterosexually active Brazilian men.

| Characteristics                        | At great risk of infection (%) | Adjusted OR | 95% CI     | p value |
|--|--------------------------------|-------------|------------|---------|
| Self-satisfaction pattern              | 7.0 <sup>a</sup>               | 0.59        | 0.38–0.91  | 0.018   |
| Relational pattern                     | 13.0 <sup>a</sup>              | 2.30        | 1.63–3.25  | <0.001  |
| Age at first sexual relation           | 6.4 <sup>b</sup>               | 0.71        | 0.53–0.96  | 0.023   |
| Total time sexually active             | 6.4 <sup>b</sup>               | 0.73        | 0.57–0.93  | 0.011   |
| Number of partners over lifetime       | 12.4 <sup>a</sup>              | 1.01        | 1.00–1.01  | 0.003   |
| Relation ‘outside’ stable relationship | 29.1                           | 7.25        | 1.76–29.79 | 0.006   |
| Age                                    | 7.6 <sup>a</sup>               | 1.37        | 1.07–1.74  | 0.012   |
| Religious affiliation                  |                                |             |            |         |
| Catholic                               | 4.8                            | 1           |            |         |
| Evangelical (Protestant)               | 7.0                            | 0.98        | 0.32–2.99  | 0.967   |
| Atheist/No affiliation                 | 10.8                           | 4.00        | 1.01–15.85 | 0.048   |
| Other religions                        | 10.2                           | 1.66        | 0.41–6.70  | 0.476   |
| Monthly household income               | 8.1 <sup>b</sup>               | 0.99        | 0.99–1.00  | 0.984   |

<sup>a</sup>Upper third considered to be at greater risk.

<sup>b</sup>Lower third considered to be at greater risk.

Taking the most recent sexual relation as a reference point made it possible to achieve greater homogeneity in the categorization of risk of infection, for three reasons: it was easier for the respondent to identify and report a specific, relevant fact, namely, his most recent sexual relation (Herbenick et al., 2010); this event was not restricted to a predefined time period, making it possible to categorize the individual according to a practice that had occurred recently or sometime in the past; and measuring a single event makes it more likely that the risk categorization reflects the individual’s habitual behaviour and most frequent practice. However, the third factor also reduces the likelihood that men

who occasionally have unprotected sex would be included in the group at great risk, which leads to the underestimation of the size of this group. In this regard, a national household survey conducted in Brazil in 2008 which enquired about sexual practices over the previous 12-month period (Pascom et al., 2011) showed that relations with casual partners (36.8%) and certain sexual relations without condoms (74.5%) were more frequent than indicated by the results observed in this study.

We sought to include different preventive strategies to rank the risk of infection with stable partners, namely, condom use and HIV testing. In different contexts, the use of condoms among stable heterosexual partners is rare (Barbosa and Koyama, 2008; Messiah and Pelletier, 1996) and is frequently associated with the choice of a contraceptive method (Spira et al., 1992). In contrast, knowledge of one's own HIV status has led to a reduction in unprotected sexual practices (Fommer et al., 2012). The shortcoming of this indicator is that knowing one's own HIV status does not necessarily mean one knows the status of one's partner or that the HIV test was taken as part of an agreement about mutual protection. Therefore, we may have overestimated the group of men who are of negligible risk.

While considering these details, the results indicate a predominant pattern among heterosexually active Brazilian men of relatively restricted sexual relations characterized by non-concurrent relationships and with stable partners, here designated as a pattern of 'conjugal interaction'. This pattern became more frequent with advancing age and with increases in the different socioeconomic strata analysed, including size of city, household income and religious affiliation. The exception to this pattern was observed among single men between 20 and 25 years of age, where the highest concentration of individuals with casual partners was found (6 out of 10). The predominance of a 'conjugal interaction' pattern was also reported among Brazilian women in two national household surveys. In these studies, the percentage of women with stable partners during the previous year varied between 95% and 89% (Barbosa and Koyama, 2008; Pascom et al., 2011). Other countries in which the HIV epidemic has similar features to that of the epidemic in Brazil also show a pattern consistent with the one observed in this study. Studies in France and the United Kingdom show no more than 15% of the population reported having more than one partner over the previous year (Mercer et al., 2013; Spira et al., 1992).

It is important to note that although our findings indicate that the pattern of 'conjugal interaction' is dominant among heterosexual men in Brazil, this does not mean that we see a divergence from cultural values of masculinity that justify and reproduce gender inequality. Social analyses on the recent shifts among genders within private and public spheres point to the conflict between predominant practices and hegemonic values. Ávila (2013) draws attention to this issue when she discusses the participation of men and women in the division of unpaid domestic work in Brazil. While the intention of a more egalitarian distribution of household work among genders is growing, in practice women spend almost four times as much time as men doing domestic work. Within the field of sexuality, Heilborn (2013) points out that Brazilian conjugality is based on the assumption that both spouses will maintain sexual exclusivity, but with the expectation also that the woman be sexually available for her spouse. Barbosa and Koyama (2008) compare two studies about sexual behaviour and practices of Brazilian

men and women done in 1998 and 2005 and show that men have five times as many sexual partners as women. We can therefore affirm that our findings present the pattern of 'conjugal interaction' as a dominant practice among heterosexually active men in Brazil, which exists alongside hegemonic values of masculinity that afford men more power. We must keep in mind that there is a distinction between hegemonic norms of masculinity and femininity and the ways in which men and women in Brazil conform to or resist these norms.

Despite the existence of this pattern of 'conjugal interaction', it is important to remember that stable partnerships do not, in and of themselves, limit the spread of HIV, so much that in certain regions of Africa more than 60% of HIV infections are attributed to such partnerships (Dunkle and Jewkes, 2007). In fact, the role of stable partnerships in the dynamic of the epidemic is intrinsically related to other characteristics of the network of sexual partners, such as the frequency of non-monogamous relations and sexual relations with individuals belonging to the group in which HIV is most prevalent (DiNenno et al., 2012).

We must also look at the fact that a segment of heterosexually active men showed great vulnerability to HIV. To demonstrate the importance of the 'at great risk' group in the Brazilian epidemic we extrapolated data from this study to analyse circumstances of risk of infection among heterosexually active men. Considering only the 57.9% of men identified by this study as being at some risk of HIV infection as the population susceptible to the epidemic, the incidence of HIV among heterosexual men in 2010 would be 18.9 per 100,000, or 1.7 times greater than the figure reported by the Ministry of Health for heterosexual men in that year (Ministry of Health, 2015). If the estimates considered only men at great risk of infection (5.9%), the incidence of HIV would be 185.1 per 100,000 heterosexual men who were exposed in 2010, or 16.5 times greater than the figure reported.

Our findings show, furthermore, a close association between patterns of masculinity, different profiles of sexual practices, and the risk of HIV infection. We observed that the more a man is close to a pattern of masculinity defined by satisfaction with one's sexuality, the more closely associated he became to sexual practices characterized by larger sexual networks, causal partners and more frequent extraconjugal activities. Identifying with said patterns also brought men closer to the great-risk group. For these men, it is likely that such identification corresponds to greater association between one's sexual practices and hegemonic values of masculinity, especially in regard to 'running or dismissing risks' and 'valuing and always being ready for sex' (Gomes, 2011; Gupta, 2000).

The data also show that a closer proximity to a pattern of masculinity defined by self-care more closely associated the man with a profile described as 'conjugal interaction' and with a negligible risk of infection. This suggests that attention to one's physical health is, for some men, more relevant to the construction of their masculinity than sexual norms or hegemonic values of masculinity, and that such attention lowers the risk of infection. It is important to note, however, that distance from a specific pattern of masculinity does not necessarily imply its complete absence in the construction of one's masculinity. The different patterns identified within the study coexist, in varying degrees of prominence, within the same context, be it individual or collective.

It is also safe to assume that the closer a man becomes to a specific pattern, the closer his relationship will be to the hegemonic values that define such pattern. Therefore, men who more closely identify with the relational pattern tend to more clearly reflect hegemonic values of masculinity related to sexuality. Concurrently, men who identify with the pattern of self-care tend to associate more with relevant hegemonic values, such as physical invulnerability and carelessness. It is important to remember that the closer proximity to the pattern of self-care that was associated with a lower risk of infection was not due to the use of condoms during one's last sexual encounter, but to a sexual profile defined by having a stable partner, smaller sexual networks and undergoing HIV screening.

It is important to highlight that there was no association between the different profiles of sexual practices, the risk of HIV and one's perception of being sexist or holding men in higher regard than women in society. It is possible that this occurred due to the wide dissemination of sexist values throughout Brazilian society that crosses social and generational strata. The historical permanence and propagation of sexism as a cultural characteristic in Brazil should be understood as a *historical process* and a *social practice* lived within daily relations laden with power between genders and in the reformulation of identity of men and women throughout their lives (Couto and Schraiber, 2013; Vigoya, 2001). That being so, one's perception of being sexist or having sexist values does not have the power to distinguish men with greater or lesser risk of contracting HIV.

As for social markers, we observed that only generation and religion were able to differentiate the chance of belonging to the group of men with great risk of HIV infection. Older men, who became sexually active before the AIDS epidemic, had a greater chance of belonging to the 'at great risk' group. This is also seen in other studies (Barbosa and Koyama, 2008; Mercer et al., 2013). However, globally, younger generations have shown a larger rise in incidence, which should not be ignored (UNAIDS, 2016). As such, it is possible that a study of prevalence such as this one may have failed to capture a changing behavioural tendency among young generations.

On the other hand, indicators of socioeconomic class and race were not associated with a higher chance of belonging to the group of great risk for HIV infection. Literature on the relationship between the AIDS epidemic and socioeconomic status has been controversial. Ecological studies have also shown that the epidemic tends to concentrate in wealthier regions throughout the world (UNAIDS, 2016). In Brazil, for example, the more developed counties show the largest epidemics (Grangeiro et al., 2010). In contrast, studies among heterosexually active men that focus on specific social segments within the group show that socially vulnerable populations, such as Black men, present a higher risk of infection (Bowleg et al., 2011; Dworkin, 2015). It is worth noting, however, that in analysing the profile of the heterosexually active Brazilian man, socioeconomic status and race did not present as distinguishing factors in regard to sexual behaviours or to an association with a higher risk of HIV infection.

## Conclusion

The present study led us to analyse the profile of heterosexually active Brazilian men within their patterns of masculinities and sexual behaviour in such a way as to

understand why, after three decades, low rates of the AIDS epidemic remain within the general population in certain contexts.

In methodological terms, we looked to construct an alternative to the analyses that focus on the significance men grant to the social practices and values regarding 'being a man' and their positions in the dynamic between genders. Without abandoning the relational dimension between men and women of the constructivist critical gender perspective, this methodological path incorporated two dimensions: that of sexual practices themselves and of the satisfaction men feel in regard to sociocultural aspects that comply with dominant masculinities. Such an endeavour coincides with the effort to reinforce recent analyses of the perspective of multiple masculinities (Bowleg et al., 2011; Dworkin, 2015) while not reproducing studies that tend to essentialize groups or segments of men defined by markers of social difference such as class, race, generation (Schrock and Schwalbe, 2009).

This allowed us to identify that the predominance of a relationship profile, which we termed 'conjugal interaction', limits the dissemination of HIV among heterosexual men. Meanwhile, we also shed light on a small and often invisible, albeit important portion of highly vulnerable heterosexually active men in Brazil. We were also able to relate the risk of or protection from HIV infection to patterns of masculinity, showing that the risk of infection grows as men approach the dominant norms of such patterns.

Our results contribute to a redirection of prevention strategies. Initially, because they present elements that change two dominant concepts: (1) that the epidemic is not as important among heterosexuals as it is for specific groups (i.e. sex workers and men that have sex with men) and (2) that HIV transmission among heterosexual men is in large part limited to specific groups, such as truck drivers and clients of sex workers.

Additionally, our findings allow for a focus of prevention strategies on a portion of heterosexually active men that are at greatest risk of infection. For these men, it is not a question of investing in strategies that aim to modify sexual practices and traits of masculinity that are associated with a greater degree of satisfaction. Rather, our findings suggest that it may be more beneficial to focus on strategies that associate preventative measures, including the use of new technologies such as PrEP, with satisfaction with one's sexuality, without reinforcing attributes of masculinity related to an absence of self-care and an asymmetrical power dynamic between genders. Focusing the prevention of heterosexual transmission on men in this way also brings about an additional benefit by shifting the emphasis away from women, who have historically had less negotiating power within their sexual relationships (Dworkin, 2015; Mills et al., 2012; Padian et al., 2011).

Finally, it is important to underline the necessity for further study into the vulnerability of heterosexually active men to HIV infection to better comprehend their values regarding gender and their sexual behaviour, inasmuch as social markers in the present study (notably socioeconomic class and race) insufficiently explained who these men are, compared to the importance of attributes of masculinity and the experience of one's sexuality. As such, the scientific community is left with the challenge to deepen the investigation into internal variations among heterosexual men from the perspective of gender and masculinities, with the aim of a greater focus on policies and strategies for coping with the epidemic.



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### Résumé

L'épidémie de VIH ne s'est pas propagée aussi rapidement parmi les populations hétérosexuelles des pays dont le niveau de revenu par habitant est de moyen à élevé. Pour mieux comprendre ce phénomène au Brésil, nous avons analysé les données recueillies lors d'une enquête nationale visant à distinguer les groupes d'hommes ayant des rapports hétérosexuels en fonction de leurs risques d'infection. Nous avons employé des rapports de cotes pour estimer les probabilités de leur appartenance au groupe à risque le plus élevé et analysé différents facteurs pour comprendre les traits spécifiques de la masculinité. Nous avons constaté que des habitudes sexuelles limitées (partenaire stable, réseau sexuel relativement modeste et activités extraconjugales peu fréquentes) freinaient la propagation du VIH. Moins d'un homme sur dix présentait des risques élevés d'infection. Les probabilités d'appartenir à ce groupe dépendent des spécificités sexuelles et des valeurs culturelles. Les hommes dont le modèle de sexualité est caractérisé par la satisfaction de sa propre sexualité ont 2,3 fois plus de chance d'appartenir au groupe à risques élevés, alors que l'habitude d'entretenir son

corps et l'attention accordée à la santé de l'autre réduisent ce risque. Cette étude montre que les hommes hétérosexuels ne constituent pas un groupe homogène. Les normes sexospécifiques influent sur les risques d'infection et il conviendrait de mener des actions de prévention à destination d'une petite partie de la population masculine.

### **Mots-clés**

Comportement sexuel, genre, hommes ayant des rapports hétérosexuels, masculinités, VIH/SIDA

### **Resumen**

La epidemia de HIV no se ha propagado ampliamente entre heterosexuales en países con tasas de ingreso per cápita de mediana a alta. Para entender este fenómeno en Brasil, analizamos datos de una encuesta nacional para distinguir grupos de hombres heterosexualmente activos en relación con su riesgo de infección. Se utilizó la razón de momio para estimar la probabilidad de pertenecer al grupo de mayor riesgo y análisis de factores para entender patrones de masculinidad. Encontramos que un patrón de comportamiento sexual restringido (tener una pareja estable, una red sexual relativamente reducida y actividades extraconyugales poco frecuentes) limitaba la propagación del VIH. Menos de 1 de cada 10 hombres presentaban un gran riesgo de infección. Las probabilidades de pertenecer a este grupo aumentaron según las características sexuales y los valores culturales. Los hombres que presentaban un patrón de masculinidad que mostraban satisfacción con su sexualidad eran 2,3 veces más propensos a pertenecer al grupo con gran riesgo, mientras que un patrón de autocuidado físico y atención a la salud reducía tal riesgo. Por lo tanto, el estudio muestra que los hombres heterosexuales no son un grupo homogéneo. Las normas de género influyen en el riesgo de infección por el VIH y una pequeña parte de los hombres debe ser considerada dentro de las políticas preventivas.

### **Palabras clave**

Comportamiento sexual, género, HIV/ SIDA, hombres heterosexualmente activos, masculinidades