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Black and non-Black women and vulnerability to HIV/AIDS in São Paulo, Brazil

ABSTRACT

OBJECTIVE: To analyze the characteristics related to individual vulnerability among HIV seropositive women, according to skin color.

METHODS: A multicenter study carried out between 1999 and 2000 in health services specialized in STI/Aids in the state of São Paulo, involving 1,068 women living with HIV who are aged 18 or above. Sociodemographic data and characteristics relating to infection and healthcare were obtained by means of individual interviews based on standardized questionnaire. The variable race/color was self-reported and women who referred to themselves as black or mixed-race were grouped together as black. The definition of variables by race/color was done using central tendency and proportions, and an association analysis using the χ^2 Pearson test.

RESULTS: The differences between black and non-black women were statistically significant with regards to: schooling; monthly, individual and family income per capita; number of direct dependents; opportunities to see a nutritionist, gynecologist or other medical professional; understanding what the infectologist said; speaking with the infectologist or gynecologist about her sex life; having correct knowledge about CD4 exams and viral load; the sexual means of exposure.

CONCLUSIONS: The use of race/color as an analytical category provides opportunities to understand better how social interactions, in the context of gender and socioeconomic conditions, create and recreate disadvantages for black women and their exposure to health risks, and also impose limits on the way they use of resources for their healthcare.

KEY WORDS: Acquired immunodeficiency syndrome. Women. Race or ethnic group distribution. Ethnic group and health. Health vulnerability. Multicenter studies.

INTRODUCTION

In modern societies, the AIDS epidemic is more acute among groups who have been historically excluded from the wealth in society, as well as among those who face cultural discrimination.[8] In Brazil, Ministry of Health data points out an increase in the number of AIDS cases in small and medium sized municipalities, which generally tend to have less resources to spend on healthcare or wider community actions; among the population with lower socioeconomic status who are indirectly affected by their level of schooling; and in the female and black populations.[4]

Studies on vulnerability, in particular in the area of AIDS, offer a valuable resource to help identify and combat social differences that influence the way the disease and its causes are distributed.[2]

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Regarding vulnerable women, these studies have highlighted a series of factors that have important practical implications, including: power differentials in the participation in decisions that involve their sexual and reproductive lives; emotional pressure that is culturally determined and which hinders prevention; and the limited perception of vulnerability among women, that is a result of the fact that women were not included among the so-called "risk groups" during the early years of the epidemic.[11]

Up until the current decade, official data that was broken down by color/race was not available.* Recent studies, however, highlight particular characteristics that make this group vulnerable and which are, independently of age or domicile, related to: the worst socioeconomic conditions; the greatest difficulty in accessing interventions, health services and provisions; the lowest indicators in terms of knowledge about the means of HIV transmission; and to the lowest levels of condom use.[12,**,***,****]

The objective of the present study was to define the characteristics that determine individual vulnerability among HIV positive women, according to skin color.

METHODS

This is a descriptive cross-sectional study drawn from a multicenter research, carried out between September 1999 and February 2000, with HIV positive women aged 18 or above who received treatment in three reference services for HIV/AIDS in São Paulo.*****

A sample of 384 women in each of the health services was selected with α=5% and β=80%. In order to select these consecutive samples, the periods of treatment were divided into sub-periods of two hours. For each sub-period, the first two women who had marked a consultation were invited to be interviewed.[13]

The interviews took place in private and were conducted by female senior health professionals with experience of working with people living with HIV/AIDS. During the interviews, a questionnaire was used containing 81 questions about sociodemographic data; sexual and reproductive lives; perception of risk of HIV infection; attention received at the health services; access and welcoming; and relations with health professionals specialized in STI/AIDS.

The data were analyzed according to self-reported race/color data, following the standards of the *Instituto Brasileiro de Geografia e Estatística* (IBGE – Brazilian Institute for Geography and Statistics), which uses the following color characteristics: black, *"parda"*, yellow, indigenous and white. The women who defined themselves as black and *"parda"* were grouped as black, while those referring to themselves as white, yellow and indigenous were grouped as non-black.

The definition of variables by race/color was done using central tendency and proportions. The association analysis between variables was carried out using the Yates corrected χ^2 test, with a 95% confidence level. For the statistical analysis, version 6.04 of the EpiInfo program was used, along with version 8.0 of SPSS.

The study protocol was approved by the ethics research commissions at the institutions involved. The interviewees participated voluntarily and signed free informed consent terms. The needs and demands identified during the research were forwarded to the respective health teams at the health units.

RESULTS

The final sample included 1,068 women, of whom 50.7% were black and 49.3% non-black. Their average age was 36.1 $\pm$ 9.0 and the average length of time since diagnosis of the infection was 4.36 $\pm$ 3.2. Sixty-two women refused to participate; however, there was no statistically significant difference in regard to age, schooling or individual monthly income, between the women who participated in the study and those who refused.

Amongst the volunteers who were interviewed, the average length of schooling was 7.7 years; for black women, this figure was 6.9 and for non-black 7.8 years. Individual median monthly income was R$387 Brazilian Reais, independent of skin color; for black women, the average was R$345, while for non-black women it was R$475. The median *per capita* monthly family income (PCMI) was R$600, falling to R$500 for black women and rising to R$800 for non-black women.

Statistically significant differences between the two groups are listed in Table 1, in relation to schooling, monthly per capita income (both individual and familial), and number of dependents.

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* Boletim Epidemiológico - Aids. Brasília, DF: Ministério da Saúde; 2006;3(1).
** Ministério da Saúde. Prevalências de DST em populações específicas. Projetos desenvolvidos pela Coordenação Nacional de DST/Aids em parceria com estados, municípios e outras instituições. Brasília; 2006 [Accessed on 8/17/2007]. Available at: http://www.aids.gov.br/data/Pages/LUMISBCD47A0DPTBRIE.htm
*** Ministério da Saúde. Comportamento sexual da população brasileira e percepções do HIV/AIDS. Brasília; 2000. (Série Avaliação, 4)
**** Ministério da Saúde. Instituto Brasileiro de Opinião e Pesquisa. Pesquisa Nacional com a População Sexualmente Ativa. Brasília; 2003 [Accessed on 8/30/2007]. Available at: http://www.aids.gov.br/
***** Enhancing Care Initiative. Mulheres e aids: desafi os para os serviços de saúde. São Paulo; 2001 [Accessed on 8/15/2007]. Available at: http://www.eci.harvard.edu.

Table 1. Sociodemographic characterisics of HIV positive women, by race/color. São Paulo, 2000.

Variable	Black	Non-black	Total	
	%	%	N	%
Schooling*				
None	5.0	0.9	37	3.5
1st Stage of Primary School	24.3	14.1	206	19.3
2nd Stage of Primary School	38.0	31.9	373	35.0
(Un)finished High School	26.2	36.1	331	31.0
(Un)finished university	6.5	16.0	119	11.2
Total (N)	(542) 100.0	(524) 100.0	1,066	100.0
			χ^2 Pearson=54.781; p<0.000 (4 g.l.)	
Individual monthly income (MW)				
Up to 1	15.4	13.5	106	14.5
1 and 3	47.4	33.4	297	40.5
3 and 5	19.4	18.0	137	18.7
5 and 7	10.0	14.4	89	12.1
7 and 9	4.3	8.8	48	6.5
More than 9	3.5	11.9	56	7.6
Total (N)	(371) 100.0	(362) 100.0	733	100.0
			χ^2 Pearson=34.974; p<0.000 (5 g.l.)	
Family monthly income (MW)				
Up to 1	45.3	30.8	373	38.2
1 and 3	41.3	38.8	392	40.0
3 and 5	8.0	13.8	106	10.8
5 and 7	3.0	5.4	41	4.2
7 and 9	1.0	4.6	27	2.8
More than 9	1.4	6.7	39	4.0
Total (N)	(498) 100.0	(480) 100.0	978	100.0
			χ^2 Pearson=52.997; p<0.000 (5 g.l.)	
Number of dependents**				
None	13.2	16.5	156	14.8
1-3	62.7	64.2	667	63.5
4-6	20.1	18.3	202	19.2
7 or more	4.0	1.0	26	2.5
Total (N)	(531) 100.0	(520) 100.0	1,051	100.0
			χ^2 Pearson=12.088; p<0.007 (3 g.l.)	

* For the purposes of this study, 1st Stage of Primary School refers to the first four years of schooling and 2nd Stage refers to the second four years (levels 5 to 8).
** Excludes women who were living in their parents' house or in a shelter.
MW: Minimum wages

Around 70% of black women had not completed high school, while this was the case for less than half of the non-black women. In terms of individual income, 63% of black women earned three minimum salaries or less per month (roughly R$1000), while the proportion of non-black women in the same situation was 47%. PCMI varied by around 15% among black and non-black women, with 45.3% of black women's PCMI less than one minimum salary (R$350) and 30.8% of non-black women's.

In spite of their lower individual salaries and family PCMI, around 25% of black women were directly responsible for four or more people, compared with 19% of non-black women.

Table 2 shows that more than 80% of women reported

Table 2. Characteristics related to HIV infection, by race/color. São Paulo, 2000.

Mean of exposure	Black woman	Non-black woman	Total	
	%	%	N	%
Sexual				
Partner Unknown	6.7	9.7	71	8.2
Partner infected by blood transfusion	0.5	1.2	7	0.8
Partner is an IDU	23.3	33.5	245	28.4
Partner infected by another man	4.0	1.6	24	2.8
Partner infected by a women	40.1	33.9	319	37.0
Partner infected by man or woman	4.9	5.3	44	5.1
Do not know means of partner's infection	20.5	14.8	152	17.7
Total* (N)	(429) 100.0	(433) 100.0	862	100.0
			χ^2 Pearson=21.920; p<0.001 (6 g.l.)	
Through Blood Transmission				
Transfusion	41.2	39.5	38	40.4
IDU	58.8	60.5	56	59.6
Total** (N)	(51) 100.0	(43) 100.0	94	100.0
			χ^2 Pearson=0.026; p<0.872 (1 g.l.)	
Other means (N)	(27) 100.0	(19) 100.0	46	100.0
Unknown (N)	(31) 100.0	(26) 100.0	57	100.0

* Total number of women who reported exposure to the virus through sexual contact
** Total number of women who reported exposure to the virus through blood transmission
IDU: Injecting drug user

that they had been infected as a result of sexual relations. In terms of exposure through sexual contact, the category "unprotected sexual relations with a partner infected by another woman" was significantly more common among black women (40.1% *versus* 33.9%), while the category "partner of an injecting drug user" was more commonly cited by non-black women (33.5% *versus* 23.3%). Not knowing how their partner was infected was also more common among black women (20.5% *versus* 14.8%).

At the time of the interviews, few women reported receiving medical care in the areas of nutrition, dentistry or psychology, or the services of any other kind of doctor, other than an infectologist or gynecologist. Around 19% of black women had already been treated by another doctor and 8.4% by a nutritionist. For non-black women, these figures were 26% and 14.5% with statistically significant differences in regard to the variables "to have been treated by a gynecologist" (χ^2Pearson = 4.707; p<0.030; 1g.l.); "to have been treated by a nutritionist" (χ^2Pearson = 9.706; p<0.002; 1g.l.); and "to have been treated by another doctor" (χ^2Pearson = 8.218; p<0.004; 1g.l.) – these results are not presented in the tables.

With regard to relations with health professionals (Table 3), there was a statistically significant difference between interviewees' race/color and answers to "ease with which infectologist is understood", "ease in speaking with the infectologist about your sex life" and "ease in speaking with the gynecologist about your sex life". In more than 25% of cases, black women reported that they understand occasionally or never what the infectologist said; for the non-black group the percentage was 8.8%. It was more common for non-black women to speak about their sex life with the infectologist (26% never discussed the subject, compared with 36% of black women). The same question was put in relation to the gynecologist. The difficulties were greater for black women (35% never discussed the matter versus 23% of non-black women).

At the time of the interviews, the majority of women, both black and non-black, had already undergone tests for CD4 count and viral load; however, many did not know the meaning and purpose of these test (39.4% for the viral load test and 49.1% for the CD4 test). The variables for "knowing the meaning of the CD4 test" and "knowing the meaning of the viral load test" proved to be statistically different depending on the race/color of the interviewees. Black women were less likely to have the correct information (Table 3).

DISCUSSION

The team responsible for the multi-centre study whose data is analyzed here, sought to guarantee the quality of evidence produced by controlling for certain factors that could potentially lead to errors.[13]

Table 3. Relationship with health professionals specialized in HIV/Aids services, by race/color. São Paulo, 2000.

Variable	Black	Non-black	Total	
	%	%	%	N
Ease in understanding what the infectologist said				
Most of the time	84.4	91.2	932	87.8
Occassionally	13.7	8.0	116	10.9
Never	1.9	0.8	14	1.3
Total (N)	(538) 100.0	(524) 100.0	1.062	100.0
			χ^2 Pearson = 11.835; p < 0.003 (2 g.l.)	
Ease in discussing their sex life with the infectologist				
Most of the time	50.9	61.1	576	55.9
Occassionally	13.2	13.2	136	13.2
Never	35.9	25.7	318	30.9
Total (N)	(521) 100.0	(509) 100.0	1,030	100.0
			χ^2 Pearson = 13.427; p < 0.001 (2 g.l.)	
Ease in discussing their sex life				
Most of the time	44.7	58.6	320	51.2
Occassionally	20.4	18.5	122	19.6
Never	34.9	22.9	183	29.3
Total (N)	(333) 100.0	(292) 100.0	625	100.0
			χ^2 Pearson = 13.608; p < 0.001 (2 g.l.)	
Meaning of the CD4 test				
Know	42.9	59.1	532	50.9
Do not know	57.1	40.9	513	49.1
Total (N)	(527) 100.0	(518) 100.0	1,045	100.0
			χ^2 Pearson = 27.395; p < 0.000 (1 g.l.)	
Meaning of the viral load exam				
Know	53.1	68.1	635	60.6
Do not know	46.9	31.9	413	39.4
Total (N)	(525) 100.0	(523) 100.0	1,048	100.0
			χ^2 Pearson = 24.445; p < 0.000 (1 g.l.)	

Although the study involved a large number of women from different locations in the state of São Paulo who had received care in areas with high prevalence and incidence rates (Santos and the city of São Paulo), informants were taken from reference services for the treatment and accompaniment of people living with HIV/AIDS. It is nonetheless necessary to take care not to generalize the findings for all HIV positive women,[13] since these services tend to attract users with better life and health conditions. The use of a consecutive sample was intended to minimize additional distortions to the intervention of services. But even so, seasonal factors and other changes that occurred during the time that the information was collected could not be resolved entirely.

The ethno-racial classification using closed categories proved to be adequate for the purposes of the present study, while recognizing that self-reported classifications of color can be denied or affirmed on the basis of someone else's perspective. There is also a tendency for people to overstate their whiteness in so far as by doing so, their chances of accessing material and symbolic goods are increased.[14]

The differences found in this study should be seen as conditions that can denote differences in the process of increasing the vulnerability of black and non-black women to HIV/AIDS in São Paulo state. However, there was never any intention to point out predicting factors and/or causes of these processes.

The socioeconomic status of the black women interviewees was worse, in terms of schooling, per capita family and individual income and living conditions. It is important to understand that the black population

in Brazil, particularly the female population,[6] is faced with restrictions to potential wealth, irrespective of HIV infection. However, it is important to highlight that this factor exerts an impact on the vulnerability of this group in terms of social issues, including any kind of exclusion, or inclusion that gives rise to exclusion, direct or indirect discrimination, or even the weakening of social groups, as Oliveira & Mattos[9] assert.

In the present study, while black women lived with less money, they were responsible for looking after more people. Considering the female population in general, the number of female headed households has increased across the whole of Brazil, particularly in urban areas. According to the National Household Survey, the majority of female headed households have a single parent, who is most commonly young, single, black, poor and with a low level of schooling.[6] Particularly in the case of HIV positive women, the responsibility for the moral and financial support of family members can increase a woman's vulnerability.[8] In addition, a seropositive status tends to increase the stigma and discrimination faced by these women leading to a perverse synergy that only further amplifies their vulnerability.[10]

The large majority of women who were interviewed reported that they had been infected as a result of sexual contact. Within this group, black women were more likely than non-black women to be in the category "unprotected sexual relations with a partner infected by another women", while the reverse was true for the category "unprotected sexual relations with a partner who is an injecting drug user". These findings indicated that black women are connected to sexual networks that include infecting agents other than HIV. Heterosexual transmission is the fastest growing form of infection in Brazil.[5]

In the collective imagination, AIDS is presented as the "disease of others", the "disease from the streets" or the "disease of singletons". Due to this interpretation, men who have a regular partner are not inclined to use condoms, other than as a contraceptive device.[7] The obstacles that women cited in relation to negotiating protected sex, independently of their level of schooling, their earning power, financial autonomy, their partners' habits or lifestyle (in the case of injecting drug users) revealed on the one hand, power differentials based on gender[4] and, on the other hand, the position of trust and complicity that regular partners hold. The stability of a sexual-affective relationship is seen as a secure passport to avoid infection, both by men and women.[1] These norms and social values, which are "naturally" absorbed and respected, certainly add to increasing women's vulnerability to HIV infection. While each sexual relationship represents a form of social interaction, a situation between individual and unique subjects, analyzing this vulnerability according to race/color is important since it leads to the identification of differences in the way in which people become exposed to the virus, as Paxton et al* have described previously, in relation to the Afro-American female population.

In comparison with the other women who were interviewed, black women received less treatment from dentists, doctors with other specializations (ie those that were not infectologists or gynecologists), as well as from other health professionals and nutritionists. The involvement of a multi-professional team in the specialist health services presupposes that all of its members reflect on the epidemic and its consequences in differing contexts. However, the data in the present study indicate that this vision of integration and intersectoral cooperation is not always present in health activities that target women living with HIV/AIDS. The care that is offered to these women seems to focus almost exclusively on anti-retroviral treatment and clinical management of the infection, without taking into consideration that integrated care can lead to benefits in clinical treatment (by, for example, controlling other concomitant factors that the illness involves), as well as respond to the legitimate demand for quality of life.

The majority of women involved in the study stated that they found it easy to speak about their concerns and address their doubts with the infectologists and gynecologist, and to understand what they said. In spite of this, many did not know how to explain the meaning and purpose of the CD4 and viral load tests.[13] Black women found it harder than their non-black counterparts to speak with specialists and to understand the meaning of their exams.

The social distance separating doctors and patients was a particularly important factor in contributing towards problems with language and understanding between people and their realities. This, added to the difficulties in addressing aspects of their lives and ignoring those issues that are directly related to the patients' clinical condition, are the principle barriers preventing positive and effective interaction between doctors and male and female users of health services.[3,15,**] By missing the opportunity to make themselves understood, the health professionals failed to contribute to improving the women's quality of life and, indirectly, added to their vulnerability to the illness. In the case of the women involved in the study, these disadvantages were more acute among black women.

* Paxton KC, Myers HF, Wyatt GE. Do the factors that predict sexual risk behaviour among women differ by ethnicity? XIV International Conference AIDS [CD-Rom] 2002 jul 7-12; Barcelona, Espanha. Bologna: Monduzzi Ed.; 2002. p. 163-6

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In conclusion, the use of the variable race/color to analyze socioanthropologic factors relating to the vulnerability of women to HIV infection and illness has meant that significant differences between black and non-black women could be identified. This heterogeneity precedes and goes beyond the presence of the virus in the women's bodies and is therefore relevant in planning programs and actions aimed at prevention and care of the HIV epidemic.

The use of race/color as a category for analysis allows for a better understanding of how social interactions – at the intersect of gender and socioeconomic conditions – create and recreate disadvantages for black women in terms of their exposure to health risks, and also lead to limitations in the adequate allocation of resources for their care.*

It is therefore recommended that further studies are needed in this area and that the health services and programs adopt measures for prevention and care that are sensitive to racial and gender-based inequalities. For this reason, inter-sectoral activities would seem to be fundamental to improve the perception and understanding of black women's vulnerability to HIV, to increase their access to the goods and services that are required to ensure integrated healthcare, to support policies that can assess and overcome social inequalities based on racial or gender-based stigma and discrimination. In addition, such activities could prepare services and health professionals to devise and improve strategies that respond to the problems cited here.

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