

# HIV risk behaviors among outpatients with severe mental illness in Rio de Janeiro, Brazil

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*We conducted the first study to examine rates of sexual activity, sexual risk behaviors, sexual protective behaviors, injection drug use (IDU), needle sharing, and knowledge about HIV/AIDS among outpatients with severe mental illness (SMI) in Rio de Janeiro, Brazil. Using a measure with demonstrated reliability, we found that 42% of 98 patients engaged in vaginal or anal sex within the past three months. Comorbid substance use disorder was significantly associated with sexual activity. Only 22% of sexually active patients used condoms consistently, despite having better HIV knowledge than those who were sexually abstinent. Overall, 45% of patients reported not engaging in any HIV protective behaviors. There were no reports of drug injection. Adults with SMI in Brazil are in need of efficacious HIV prevention programs and policies that can sustain these programs within mental health treatment settings.*

**Key words:** HIV, risk behaviors, prevention interventions, severe mental illness, Brazil

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Relatively little is known about HIV risk taking among individuals with severe mental illness (SMI) outside the United States. Two recent reviews of more than 50 published studies of HIV risk behaviors among people with SMI (1,2) found only ten from non-US countries, and nearly all were conducted in developed countries. US studies reported higher rates of sexual risk behavior compared to international studies, particularly with respect to sex trade and injection drug use (IDU) (2). Across all of these studies, substantial rates of recent sexual activity and sexual risk behavior were reported: sexual activity in the past 3 to 12 months by 32% to 74% of patients; multiple sexual partners in the past 3 to 12 months by 13% to 69%; regular condom use in the past 3 to 12 months by 8% to 49%; sex trade in the past year by 2% to 42%; IDU ever by 12% to 45%; and needle sharing ever by 15% to 73% of injection drug users.

These risks were present despite relatively high levels of HIV/AIDS knowledge. Although measures used in prior studies of psychiatric populations varied, the average HIV knowledge score (i.e., percent correct responses) ranged from 63% to 80% (3-6). While not sufficient alone to change behavior, knowledge is a necessary component to effect risk behavior reduction (7).

In Brazil, sexual risk behavior studies about psychiatric patients are limited. In one study conducted in Minas Gerais, 68.2% of the sexually active sample reported not using condoms, 20.1% reported a risky partner, and 2.6% reported sex in exchange for alcohol, drugs or shelter (8). Another study in Rio de Janeiro found considerable sexual risk-taking in the previous year: 63% were sexually active; of those, 72% did not use condoms regularly and 49% never used condoms (9). However, the reliability of the measures used

to obtain these data was not tested, and samples did not include only people with SMI. To date, no IDU or HIV knowledge rates have been reported among Brazilian adults with SMI.

This paper is the first report of HIV-related behaviors by people with SMI in Brazil obtained using a sexual risk behavior assessment that has demonstrated reliability with psychiatric patients (10-12). We report the degree of knowledge about HIV/AIDS, prevalence of IDU and needle sharing, rates of sexual activity, sexual risk-taking and protective behaviors, as well as reasons for sexual abstinence and for not using condoms in a sample of outpatients with SMI in Rio de Janeiro.

## METHODS

### Setting and participants

Participants were adults with SMI attending the outpatient psychiatric clinic and the day-hospital of the Psychiatric Institute of the Federal University of Rio de Janeiro. In this setting, patients whose primary treatment need is represented by substance use disorder are referred to dual diagnosis clinics elsewhere. As part of standard clinical care, informal sexual health drop-in group education sessions are offered every other week to all patients interested in participating.

All study procedures were approved by institutional review boards of both the New York State Psychiatric Institute and the Psychiatric Institute of the Federal University of Rio de Janeiro, as well as the National Ethics Commission on

Research of the National Council of Health, Brazilian Ministry of Health. Patients were either self-referred or referred by clinic providers. Eligible, consenting patients participated in a baseline interview before participating in a pilot risk-reduction intervention (13). This paper reports findings from baseline interviews.

Patients were eligible if they were 18 years of age or older; diagnosed with schizophrenia, schizoaffective disorder, bipolar disorder, major depression with psychotic features, or psychosis not otherwise specified; and capable of giving written informed consent. Patients were not eligible if they had acute psychosis or suicidality at the time of the screening interview; developmental disability as a primary diagnosis; or a substance-induced psychotic disorder. Inclusion criteria did not require participants to be sexually active in the last three months.

Both a licensed mental health professional who was a member of the patient's clinical treatment team and a research team psychiatrist evaluated patients' capacity to consent to participation in the study. Patients who declined to participate in the intervention pilot study or who met any of the exclusion criteria were informed about the ongoing sexual health drop-in groups that are part of standard clinical care.

Of the 221 patients (110 females/111 males) screened, 139 (63%) with interest and capacity to participate gave written informed consent. Of these, 36 (26% of those who consented) did not meet inclusion criteria. Reports of four participants were excluded due to responses that were rated by interviewers as unreliable. The remaining 98 patients comprised the study sample. Participation in the study was not compensated, but transportation vouchers and refreshments were offered to participants.

### Assessment procedures

All assessments were conducted in face-to-face interviews between October 2004 and August 2005. Instruments that had not been previously used in Brazil were translated and tailored to enhance cultural specificity for Brazilian SMI men and women after a year of formative ethnographic work (13). Patients completed all measures in approximately two and a half hours, on average.

Psychiatric diagnosis was obtained by research team psychiatrists using the Mini International Neuropsychiatric Interview – PLUS (MINI PLUS), a structured psychiatric assessment developed and validated for DSM-IV and ICD-10 diagnosis with both US and Brazilian patients (14,15).

Information on sexual risk behaviors in the past three months was obtained by research interviewers (clinical psychologists) using the Sexual Risk Behavior Assessment Schedule (SERBAS), adapted to encompass risk behaviors and contexts specific to the patient population in Brazil. The Brazilian SERBAS (SERBAS-B) is a semi-structured interview that elicits detailed information regarding sexual practices and related alcohol and other drug use in the past three

months. Data collected include the number, gender, and type (casual, steady, new) of sexual partners; the types of sexual acts performed at each encounter; whether sexual acts were protected by condoms; whether alcohol or other drugs were used during sexual occasions; whether sex was bought, sold or exchanged for something (e.g., drugs, shelter); and a participant's knowledge of his/her partner's HIV testing history and status. The interview underwent rigorous reliability testing and showed reasonable to excellent test re-test reliability (11), comparable to findings in US samples (10,12). For exploratory purposes, data also were collected on HIV protective behaviors in the past three months, to determine whether participants had engaged in behaviors deliberately as a means of reducing the risk of contracting or transmitting HIV. Protective behaviors included reducing the number of sex occasions, reducing the number of sex partners, changing specific sexual practices, and using condoms more frequently.

Participants were asked how often in the past three months they injected drugs into their veins or under their skin, with answers scored on a 5-point scale ranging from never to daily. If any patient reported injecting behavior, information was to be collected on the use of injection implements (e.g., needles, syringes, wash water, cottons) after someone else had used them, and on any cleaning of implements prior to using them to inject themselves.

Knowledge about HIV transmission and prevention was assessed using the Brief HIV Knowledge Questionnaire (Brief HIV-KQ), an 18-item true/false scale (16), with higher scores indicating greater HIV-related knowledge. This instrument was translated from English into Portuguese, and back-translation from Portuguese to English was performed to check for errors and fidelity to the original English version. This process resulted in the elimination of one item due to confusing double-negative phrasing in Portuguese. Scores in the current study therefore range from 0 to 17.

After clarification of what an HIV test is, participants were asked if they had taken the HIV test in the past 3 months. A negative answer prompted inquiring about the last time the participant had been tested for HIV. "Not sure/don't know" responses prompted clarification. Known positive or negative test results were elicited, as were decisions not to return for testing results.

Participants were asked whether, within the last year, they had participated in any type of program specifically intended to help them decrease sexual risks or increase safer sex. Although the standard-care drop-in groups were focused on sexuality and not, specifically, on HIV prevention or sexual risk behavior, this question did not expressly include or exclude the ongoing sexual health drop-in groups offered in the treatment programs from which the sample was selected.

### Data analysis

Differences in being sexually active (versus not sexually

active) by key demographic and clinical characteristics were tested using Fisher's exact test for categorical data and t-tests for continuous data. Because engaging in sexual activity within the prior three months was not an eligibility criterion for study participation, some sexual risk and protective behaviors were reported by proportions of the sample that could not be reliably subjected to statistical tests of significance due to small cell sizes. We therefore present descriptive data on HIV risk and protective behaviors in the previous three months, as well as reasons given for not being sexually active and for not using condoms.

## RESULTS

The total sample (n=98) comprised 49.0% men and 51.0% women. Self-described racial/ethnic categories were 45.9% white, 37.8% multiracial, and 16.3% black. The mean age of participants was 41.8±11.1 years (range 21-70). Most of the sample (72.5%) was single; 13.3% reported being married/in a long-term relationship, and 14.3% were separated, divorced or widowed. Half of the participants (50.0%) had a diagnosis of schizophrenia, 27.6% of bipolar disorder, 10.2% of major depressive disorder with psychotic features, 4.1% of schizoaffective disorder, and 8.2% of psychosis not otherwise specified. A current comorbid substance use disorder was present in 11.2% of the sample. Of those with a substance use disorder, six reported abuse/de-

pendence of marijuana (54.4%), two of alcohol (18.2%), two of benzodiazepines (18.2%), and one of cocaine (9%). About two-fifths of the sample (38.8%) had completed primary school, 40.8% had completed secondary school, 9.2% had completed college, while 11.2% had not completed or attended primary school.

The mean score for HIV knowledge for the entire sample was 10.4±3.3 out of 17 (range 1-16), corresponding to 61.2% correct responses.

Of the 98 study participants, 53 (54.1%) reported having been tested ever. Of those tested, one (1.9%) reported a positive HIV status and one (1.9%) reported not receiving the test result; the remaining 51 (96.2%) reported negative HIV test results. Twenty-two (41.5%) of the tested patients reported that their HIV test had been done in the past year.

Nineteen of 98 participants (19.4%) reported having participated in a program specifically provided to increase sexual safety or reduce unsafe sexual activity in the previous year. No participant reported IDU in the past 3 months.

A total of 41.8% of the sample reported engaging in vaginal or anal sex within the past three months. Table 1 presents differences in sexual activity versus inactivity by demographic variables. Significant differences included the following: those who were sexually active were younger ( $t=2.43$ ,  $df=96$ ,  $p<0.01$ ), were more likely to be married or in a long-term relationship ( $X^2=8.01$ ,  $df=2$ ,  $p<0.05$ ), had a higher prevalence of comorbid substance use disorder ( $X^2=12.03$ ,  $df=1$ ,  $p<0.01$ ), had a higher mean HIV knowledge score ( $t=-2.92$ ,

**Table 1** Demographic and clinical differences between sexually active and inactive SMI patients (n=98)

	Inactive (n=57)	Active (n=41)	$\chi^2$ or t	p
Gender (% male)	45.6	53.7	0.62	0.54
Age (years, mean ± SD)	44.0±11.1	38.7±10.4	2.43	0.02
Race/ethnicity (%)				
Black	14.0	19.5	1.43	0.50
White	50.9	39.0		
Multi-racial	35.1	41.5		
Marital status (%)				
Single	77.2	65.9	8.01	0.02
Married/long-term relationship	5.3	24.4		
Separated/divorced/widowed	17.5	9.8		
Diagnosis (%)				
Schizophrenia	54.4	43.9	3.19	0.38
Bipolar disorder	21.1	36.6		
Major depressive disorder with psychotic features	12.3	7.3		
Other (schizoaffective disorder and psychosis not otherwise specified)	12.3	12.2		
Comorbid substance use disorder (%)	1.8	24.4	12.03	0.001
Education completed (%)				
Grade school	36.8	41.5	0.29	0.88
High school and beyond	50.9	48.8		
Did not attend/complete grade school	12.3	9.8		
HIV-relevant history				
HIV knowledge score (mean ± SD)	9.6± 3.5	11.5±2.7	-2.92	0.001
HIV/AIDS prevention programs experience (past year, %)	19.3	19.5	0.01	1.00
HIV test (lifetime, %)	40.4	73.2	10.34	0.001

SMI – severe mental illness

df=96,  $p<0.01$ ), and were more likely to have received HIV testing ( $X^2=10.34$ ,  $df=1$ ,  $p<0.01$ ). Same-gender sexual partners were reported by 10.4% of men and 2.0% of women. One sexually active participant reported being HIV positive. There were no differences in sexual activity by gender or diagnosis.

Fifty-two of 57 participants who were sexually inactive in the past three months provided one or more reasons why they did not engage in sexual activity. Almost half of the men (45.8%) and women (46.4%) reported not having a current partner as the most common reason for sexual inactivity. Lack of interest in sexual activity was cited by 16.7% of men and 28.6% of women. Among men, other common reasons given were mental illness/medication side effects (20.8%), and concern about being (re)infected with HIV by partner (16.7%). Among women, other common reasons given were concern about being (re)infected by partners (10.7%), and fear or anxiety related to sexual activity (10.7%).

Table 2 shows prevalence of HIV risk and HIV protective behaviors among those who were sexually active ( $n=41$ ) within the past three months. Almost half (43.9%) of those who engaged in vaginal or anal sex reported no condom use in the prior three months and 34.2% reported inconsistent condom use; only nine participants (22.0%) reported using condoms on every sex occasion. Over half (53.7%) reported having partners whose HIV status was unknown, and 26.8% reported having more than one partner (partner range 2-12). Almost two-fifths (39.0%) reported using alcohol or drugs prior to sexual activity, and 19.5% (all men) reported sex exchange, with the majority of this activity involving purchasing sex. Of those who were sexually active, the range of risk behaviors was 0-6, with 56.1% engaging in three or more. Only 4.9% reported no risk behaviors.

Sexually active participants who did not use condoms ( $n=32$ ) were asked to provide reasons for not doing so. Half (50.0%) of the 16 male participants cited trust in their

partner(s). Other common reasons among men were perception of self as not at risk (18.8%), participant's own preference not to use condoms (18.8%), difficulty sustaining an erection when wearing a condom (12.5%), and other sexual dysfunction (12.5%). Among the 16 female participants, 60.5% reported not using a condom due to their partners' preference. Other common reasons among women were: condoms unavailable at the time of intercourse (31.3%), trust in their partner(s) (25.0%), not being in the habit of using condoms (18.8%), and participant's own preference not to use condoms (18.8%).

When asked to describe all methods they had used expressly to avoid HIV/AIDS in the past three months, 22.0% of sexually active patients said they used condoms for every sexual occasion, 25.0% reported using more condoms, 20.0% reported having fewer partners, and 12.5% reported having fewer sex occasions as practices to avoid contracting HIV. Overall, the range of protective behaviors reported was 0-3, with 25.0% engaging in two or more protective behaviors; 42.5% reported not engaging in HIV-protective behaviors.

## DISCUSSION

We have presented findings from the first study to examine HIV risk behaviors among Brazilian SMI patients using a risk-assessment instrument with proven reliability among SMI populations. We found that almost 42% of SMI patients were sexually active in the past three months, a rate comparable to the weighted mean for sexual activity in the past three months across all prior studies of SMI patients (2). Almost all of those who were sexually active engaged in HIV-related sexual risk behaviors, and over half of them engaged in three or more such behaviors.

Though, from an HIV prevention perspective, sexual inactivity for the prior three months among nearly 60% of patients may seem reassuring, those patients who are abstinent now may be active in the future. In this study, the most common reason given by participants for sexual inactivity was lack of a current partner, cited by two-fifths of men and women; only one-fifth reported no interest in sex. The absence of a regular partner may lead to future sexual activity with poorly known or risky partners when opportunities present themselves (17). As a form of public health inoculation, efficacious prevention interventions should be offered to all interested patients, regardless of their current sexual activity. It is also possible that, from a quality of life perspective, sexual inactivity among psychiatric patients living in the community is a problem that needs to be addressed. Understanding more about the context and reasons why individuals with SMI are sexually inactive is an important goal of future research.

Compared to sexually inactive subjects, those who reported sexual activity were younger, were more likely to be in a long-term relationship, to have a comorbid substance use disorder and to have had an HIV antibody test, and had a

**Table 2** Prevalence of HIV sexual risk and protective behaviors among SMI patients within the past three months ( $n=41$ )

Any risk behavior (%)	95.1
<100% condom use (%)	34.2
No condom use (%)	43.9
High risk partners - unknown HIV diagnosis (%)	57.5
High risk partners - HIV+ partner (%)	7.5
Multiple partners (%)	26.8
Any sex exchange/trade (%)	19.5
Any drug during sex (%)	39.0
Any IDU history (%)	0
Any protective behavior (%)	53.7
Always use condoms (%)	22.0
Reduced sex occasions (%)	12.5
Reduced number of sexual partners (%)	20.0
Changed specific sexual practices (%)	2.5
Used more condoms (%)	25.0
Other (%)	7.5
No protective behaviors (%)	42.5

SMI – severe mental illness; IDU – injection drug use

higher mean HIV knowledge score. As with SMI samples elsewhere (2) and other populations (7), these findings suggest that patients most at risk for HIV are aware of the problem/disease. HIV testing in the prior year was reported by 42% of participants, comparable to the rate of voluntary testing reported in the US (18), but the average HIV knowledge score in our Brazil sample was lower than the range found in prior studies of psychiatric populations (3-6), despite the fact that one in five of our subjects had participated in some type of HIV prevention program and all of them had access to ongoing sexual health drop-in groups. Patients who had attended prior HIV prevention programs did not have better HIV knowledge than those who had not received these services. Besides addressing sexual risk reduction skills, interventions developed for Brazilian SMI people must increase basic knowledge of HIV risk and transmission and attend to misperceptions about risk held by participants.

Almost 28% of our sample reported being in a current or prior marriage or long-term relationship. Although we did not ascertain to what extent the expectation of monogamy was part of these relationships, half of the sexually active men and a quarter of the sexually active women cited trust in their partners as the reason for not using condoms. As Gordon et al (19) found among SMI in the US, it may be that stable partnerships are perceived as "safe" and, as such, negotiation about HIV or condoms may not be considered necessary. Future research should examine closely these stable relationships, and, if they are unsafe, HIV interventions will need to address the difficult task of introducing condoms in a long-term or significant relationship. This task may be complicated by economic dependence (19,20) and the belief that people with SMI are not in the position to choose or negotiate with their partners (21).

Despite the low rate of substance use disorder among this sample, almost 40% of those sexually active reported using substances during sexual intercourse. Substance use during sexual activity has been associated with lower condom use rates among SMI patients elsewhere (22). Moreover, substance use in other populations (e.g., men who have sex with men, injection drug users) has been shown to increase sexual risk-taking, in part, by attenuating or counteracting anxiety around sexual activity (23,24). Individuals with SMI may use substances to some extent as a way to minimize stigma-related social or sexual anxiety. In addition to reducing risk behaviors and increasing skills associated with condom use such as assertiveness and negotiation (6,25-29), interventions for SMI in Brazil must also target the use of alcohol or drugs during sex.

It is important to highlight some key differences compared with prior SMI studies that may help to guide prevention intervention development, adaptation, and implementation in Brazil and in other countries where psychiatric patients are particularly vulnerable. While comparison with other studies of psychiatric patients is difficult, due to different instrumentation and assessment time periods, sexually active patients in this Brazilian sample had a lower rate of

condom use compared to samples enrolled in previous studies (2). We did not collect data on condom acceptability or availability for this population, but patients did cite relationship (e.g., trust in partner) and sexual performance (e.g., difficulty sustaining an erection) aspects of condom use that deserve attention in future studies. Still, the most common (60%) reason among sexually active women for not using a condom was their partners' preference, a reason that was cited by none of the men. This finding is consistent with patterns seen among women in a variety of populations in the AIDS epidemic, and is an impetus for more widespread development and uptake of female controlled methods, such as the female condom and microbicides. In fact, Brazil's epidemic has been characterized as "feminizing, heterosexualizing, and pauperizing" (30). Distribution at a reasonable cost of female condoms and development of safe and effective microbicides should be viewed as priorities in the control of HIV in Brazil, including among those with SMI.

In this Brazilian SMI sample, about one-third of the sexually active men reported purchasing sex, a proportion much higher than previously reported in non-homeless or non-indigent persons with SMI (2), and none of the sexually active women reported engaging in sex exchange, in contrast with prior studies that found that women with SMI may engage in "survival sex" (2,20), exchanging sex for money, food, shelter, or drugs. Adults in treatment for SMI in Brazil tend to live with their families, which may protect them from having to give sex for food or shelter. Further, substance use during sex was common, but substance abuse/dependence, which may fuel sex trading, was not. Research that examines the context in which those with SMI purchase sex or exchange sex is important to undertake, as is examining those behaviors' relationship to condom use, in order to identify the salient social and economic factors (e.g., poverty, relational power imbalances) driving risk behaviors in this population and to design appropriate interventions to address those factors.

Unlike in previous studies, we examined whether sexually active SMI patients were deliberately taking measures to reduce HIV transmission regardless of participation in any type of prevention program: 58% of sexually active patients had taken at least one protective measure, most commonly using more condoms and having fewer partners. Nevertheless, only 5% of these patients reported no HIV-related risk behaviors, and 56% reported three or more risk behaviors. Understanding what motivates HIV-protective behaviors and changes and how those motivations can be incorporated into efficacious prevention interventions will be an important next step for researchers to take.

The absence of IDU is a major difference when compared to the weighted lifetime rate across all prior SMI studies of nearly 22% and the weighted past-year rates of 4% (2). This may simply reflect the geographic distribution of IDU, which is clearly more prevalent in some countries than in others and in some regions of Brazil, though less so in Rio de Janeiro, than elsewhere (31). Further, our sample was drawn

from clinical settings where the primary disorder being treated was not substance use disorder. IDU is more prevalent and frequent among those with primary substance use disorder than among SMI patients whose substance use is not a determinant of the presenting psychiatric problem (32). Moreover, substances preferred by those with comorbid substance use disorder in this sample (marijuana, alcohol, benzodiazepine, and cocaine) do not require being injected to achieve potency. Prevention interventions with demonstrated efficacy among psychiatric patients have focused on sexual behavior, including that which occurs while drinking or using drugs, rather than on IDU (6,25-29). Such focus seems appropriate for intervention with samples like ours, although harm reduction strategies for IDU may be an important component of interventions for SMI patients with even intermittent injection behaviors and should not be presumed to be irrelevant even if IDU is not a current behavior.

In our study, except for psychiatric diagnoses, all data were based on self-report and are therefore subject to response bias (33). With the exception of protective behaviors, we used dependent measures with documented test-retest reliability (11), thereby minimizing such bias. We examined vaginal and anal sex occasions, possibly missing opportunities to understand whether participants may have engaged in oral sex as a "safer" alternative. Also, the use of a convenience sample raises the possibility of selection bias: for example, our sample was older (mean age 42 years) relative to those in prior SMI risk behavior studies (2), possibly leading us to underestimate sexual activity and risk behavior. The results of the current study may not generalize to adults with SMI who are in treatment but are not inclined to participate in research, those who do not receive psychiatric treatment, or those whose personal, clinical, socioeconomic, or cultural situations differ from those of our sample. Moreover, the low rate of substance use disorders in this sample limits the generalizability to SMI with comorbid substance disorders. Finally, cross-sectional data were obtained; longitudinal studies with larger samples are needed to elucidate the direction and temporal nature of the relationships between HIV risk behaviors and patients' characteristics.

In Brazil, where sexuality is considered a human right, helping patients develop relationship skills and overcome mental illness-related obstacles to developing intimate connections is seen as a desirable goal by many mental health care providers and their patients. However, the unstructured, informal drop-in sexual health group is not the standard of care throughout Brazil, and policy there, as elsewhere, has been slow to address sexuality in the SMI population with anything but proscription (21).

HIV prevention interventions for the SMI population must be carefully tailored to their specific needs. An HIV prevention intervention is now being tested in a randomized controlled trial taking place in municipal mental health centers throughout Rio de Janeiro. Thus, Brazil is poised to continue its legacy as a world leader in fighting AIDS (30,34) by reaching the vulnerable population of people with SMI. Bra-

zil's programmatic and policy decisions can aid in the development of integrated programs in other low- and middle-income countries, and inform similar programs and policies in developed countries as well.

We found similarities (i.e., similar rates of sexual activity and risk) and differences (i.e., no IDU and sex exchange primarily consisting of purchasing sex) in our Rio de Janeiro sample compared to other regions of the world. By looking at the differences between countries, we may learn more about the impact of environmental factors on risky and protective behaviors among adults with SMI, and target interventions to address them effectively.

## APPENDIX

The team members of PRISSMA 2002-2006 (Projeto Interdisciplinar em Sexualidade, Saúde Mental e AIDS – Interdisciplinary Project in Sexuality, Mental Health and AIDS) are Denise Feijó, Tatiana Dutra, Carlos Linhares, Alfredo Gonzalez, André Nunes, Fernanda Gomes, Abmael de Sousa Alves, Alexander Ramalho, Débora Salles, Denise Corrêa, Erínia Belchior, Márcia Silviano, Maria Tavares, and Vandrê Matias Vidal.

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