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Sexually explicit media consumption and HIV/AIDS risk practices in northeastern Brazil

Consumo de mídias sexuais explícitas e práticas de risco ao HIV/Aids no nordeste brasileiro

Consumo de medios sexualmente explícitos y prácticas de riesgo para VIH/SIDA en el noreste de Brasil

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Abstract

Objective: To analyze the influence of Sexually Explicit Media consumption on HIV/AIDS risk practices in residents of the Northeast region of the country. **Methods:** This is an analytical and cross-sectional study, including 349 residents of the Northeast region aged at least 18 years old. The data were collected online from July to December 2021 using an adapted questionnaire. The outcome variable was condom use during sexual intercourse (yes/no). Hierarchical Multiple Logistic Regression with adjusted odds ratio was performed to explain the effect of the predictive variables on the dependent variable. **Results:** Earning incomes above one minimum wage and being single increase the chances of condom use, whereas being in a relationship, married or with a partner, the withdrawal method, sex without penetration, knowledge about one's own serological status and the partners', use of Pre-Exposure Prophylaxis, and difficulties and impossibility accessing condoms during the pandemic were protective factors against their use. **Conclusion:** Sexually explicit media consumption did not influence non-use of condoms. However, practices used to prevent HIV/AIDS were observed, which disregard combined prevention, implying the need to implement sexual education strategies with a view to preventing HIV/AIDS and other sexually transmitted infections.

Descriptors: Video-Audio Media; Sexual Behavior; Condoms; HIV.

Whats is already known on this?
Sexually Explicit Media (SEM) consumption has both negative consequences, such as the adoption of unsafe sexual practices, and positive aspects related to the construction of sexual identity.

What this study adds?
Knowledge about some measures used to prevent Sexually Transmitted Infections (STIs) reduces the chances of using condoms during sexual intercourse.

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Resumo

Objetivo: *Analisar a influência do consumo de Mídias Sexuais Explícitas nas práticas de risco ao HIV/Aids em residentes da região nordeste do país.* ***Métodos:*** *Trata-se de um estudo analítico, transversal, incluindo 349 residentes da região nordeste com idade a partir de 18 anos. Os dados foram coletados de forma online, no período de julho a dezembro de 2021, utilizando-se questionário adaptado. A variável desfecho foi o uso do preservativo nas relações sexuais (sim/não). Realizou-se a Regressão de Logística Múltipla Hierárquica com razão de chance ajustada, para explicar o efeito das variáveis preditoras sobre a variável dependente.* ***Resultados:*** *Ter renda maior que um salário-mínimo e estar solteiro aumentam as chances de uso do preservativo, enquanto estar namorando, casado ou unido, coito interrompido, sexo sem penetração, conhecimento do status sorológico e das parcerias, uso de Profilaxia Pré-Exposição, dificuldades e impossibilidades de acesso ao preservativo na pandemia foram fatores de proteção contra o uso.* ***Conclusão:*** *O consumo de mídias sexuais explícitas não influenciou o não uso de preservativo. Entretanto, observaram-se práticas utilizadas como preventivas ao HIV/Aids, que desconsideram a prevenção combinada implicando na necessidade de implementação de estratégias de educação sexual com vistas à prevenção do HIV/Aids e outras infecções sexualmente transmissíveis.*

Descritores: *Mídia Audiovisual; Comportamento Sexual; Preservativos; HIV.*

Resumén

Objetivo: *Analizar la influencia del consumo de Medios Sexualmente Explícitos en las prácticas de riesgo para VIH/SIDA en residentes de la región noreste del país.* ***Métodos:*** *Estudio analítico y transversal que incluyó a 349 residentes de la región noreste de al menos 18 años de edad. Los datos se recolectaron online entre julio y diciembre de 2021, por medio de un cuestionario adaptado. La variable de desenlace fue el uso de condones en relaciones sexuales (sí/no). Se realizó un análisis de Regresión Logística Múltiple Jerárquico con Odas Ratio ajustada para explicar el efecto de las variables predictivas sobre la variable dependiente.* ***Resultados:*** *Resultados: Tener ingresos superiores a un salario mínimo y ser soltero aumentan las probabilidades de usar condones, mientras que estar en una relación de noviazgo, matrimonio o convivencia, coitus interruptus, sexo sin penetración, conocer el estado serológico propio y de las parejas, utilizar Profilaxis Pre-Exposición y dificultades e imposibilidad de acceder a condones durante la pandemia fueron factores de protección contra dicho uso.* ***Conclusión:*** *El consumo de medios sexualmente explícitos no ejerció influencia alguna sobre el no uso de condones. Sin embargo, se observaron prácticas utilizadas como preventivas contra VIH/SIDA que desconsideran la prevención combinada, lo que redunda en la necesidad de implementar estrategias de educación sexual con vistas a prevenir el VIH/SIDA y otras infecciones de transmisión sexual.*

Descriptores*: Medios Audiovisuales; Conducta Sexual; Condones; VIH.*

INTRODUCTION

One of the main problems found in the modern world is the high rates of Sexually Transmitted Infections (STIs), with the infection produced by the Acquired Immunodeficiency Virus (HIV) as a major highlight. Brazil is the Latin American country most affected by the epidemic, being the only nation in that territory to have an increase in the number of new infections.[1]

Scholars have been concerned about a new tool that may be associated with the spread of Sexually Transmitted Infections (STIs), especially HIV/AIDS: Sexually Explicit Media (SEM). This component comprises any type of material describing genitals or explicit sexual acts of any nature, capable of stimulating or modifying the viewer's sexual feelings or thoughts.[2]

The form of exposure to the infection is an important epidemiology category. Some evidence reveals the need for health services to intensify counseling actions and the identification of vulnerabilities, as a mechanism to guide individuals regarding their choice of prevention strategies.[3,4]

Currently, due to the COVID-19 pandemic, websites featuring sexually explicit material have seen a 600% increase in views when compared to the same period last year. There is evidence that 64% of workers started to work from their homes and, with that, there was a change in the users' behavior.[5]

Within this study area there are some divergences regarding access to pornography and the impact on relationships. An American study, for example, came to the conclusion that access to SEM has benefits such as understanding one's desires, knowledge and construction of one's one sexual identity, beyond the practice of safe sex.[6] On the other hand, a survey carried out in Europe addresses the negative effects observed with the use of pornography, such as the association between pornography use and aggressive sexual behavior.[7]

Studies on SEM are still scarce, despite their high consumption in the country. Therefore, this research has the purpose of identifying behaviors related to sexual practices, which can include populations belonging to any age group, in a worrying way in the path of the AIDS epidemic and of other STIs, with the purpose of subsidizing the adoption of measures fir health promotion and prevention of risk factors. In view of this, the study aims at analyzing the influence of Sexually Explicit Media consumption on HIV/AIDS risk practices in residents of the Brazilian Northeast region.

METHODS

An analytical, cross-sectional, online and regional study, which is part of a nationwide macro-study. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) for cross-sectional studies Equator instrument was used to ensure methodological conformity of the research.[8]

The macro-study involved all five geographic regions of Brazil, in order to obtain primary information on SEM consumption and sexual health status, especially those related to HIV/AIDS. An intentional sample was employed based on the Brazilian population aged at least 18 years old. At the end of recruitment, the total sample consisted of 854 individuals, of which 349 were residents of the Northeast region. To evaluate the sample size power in this study, the G*Power 3.1 software was used, with post hoc analysis of the sample required for statistics in contingency tables, considering a 95% confidence interval, alpha of 0.05 and effect of size of 0.15. The sample obtained 99.8% power, exceeding the minimum requirements. The following inclusion criteria were considered: making use of some social network, age from 18 years old and living in the Northeast.

The data were collected by the study researchers themselves, who have experience in research studies on HIV/AIDS, other STIs and online collection. Data collection was carried out from July to December 2021, for which a questionnaire adapted from the study by Queiroz et al. was used.[9] In addition, although already validated, understanding that the population, the period and context were different, the instrument was subjected to face and content validity (CVI=100%).

The questionnaire and the Informed Consent Form were made available and hosted on Google Forms, which provides customizable surveys, as well as a suite of back-end programs, which includes data analysis, selection of samples and data representation tools, in addition to allowing all mandatory questions to be answered. Thus, the participants' responses were only computed when all conditions were met.

The research variables of interest included the following: 1. Sociodemographic data (age, profession, gender, sexual orientation, gender identity, income, marital status, schooling, religious practice, household arrangement); 2. Health conditions/information (current or past STI history, knowledge about the serological status for HIV, testing for HIV/AIDS ever in life, symptoms of STIs in the last 12 months, vaccination for hepatitis B, knowledge about PEP – Post-Exposure Prophylaxis and PrEP – Pre-Exposure Prophylaxis); 3. SEM consumption (age at which the participant started viewing pornography, habit of viewing pornography, main form of access, whether the sexual media encourage condom use, change in the concept of sex after SEM consumption, agreement in sharing sexual scenes involving risk behaviors); 4. Sexual practices (if the participant is in a relationship, has a sexual partner, meeting a sexual partner through some app, which apps the participant uses, if the participant has already used PEP, prevention measures against STIs during sex, using alcohol and illicit drugs when having sex, attending gay sauna, cinema, gay bars or other cruising point in the last 6 months, sexual practice in the last 6 months, unprotected oral sex, unprotected anal sex in the last 30 days and 12 months, group sex, knowledge about the last partner's serological status, sex with a person known to be HIV+, number of partners with whom the participant had sex in the last 6 months, whether the participant considers themselves at risk for HIV infection); 5. Access to health services (where to search information on STIs/AIDS, use frequency of health services, good care received in the health services, convenience in the BHU opening hours, access to condoms after the coronavirus/COVID-19 pandemic). The outcome variable was the condom use during sexual intercourse (yes/no).

The data were analyzed using the Statistical Package for the Social Science (SPSS) software, version 20.0.

For the univariate analysis, statistics through absolute and relative frequencies were used. Still in the univariate statistics, the Kolmogorov-Smirnov test was used to verify normality of the continuous quantitative variables, which presented normal distribution.

In the bivariate analysis, Fisher's Exact and Pearson's Chi-square ($\chi 2$) tests were used, the latter to associate the explanatory qualitative variables and the former for the quantitative variables, with the study response variable, which is condom use during sexual intercourse.

To explain the joint effect of the predictive variables (qualitative and quantitative variables) on the dependent variable (qualitative variable) the Hierarchical Multiple Logistic Regression (HMLR) with adjusted odds ratio (ORa) was used.

The criterion for including variables in the logistic model was an association at the 20% level ($p<0.200$) in the bivariate analysis and 5% ($p<0.05$) in the multivariate analysis.

The study was approved by the Research Ethics Committee of the Federal University of Piauí, under opinion No. 3,915,991.

RESULTS

According to the sociodemographic and cultural characteristics of the sample, the minimum age is 18 years old and the maximum is 59. Most of the participants are female (48.4%), heterosexual (57.3%), students (58.5%), earning incomes of less than one minimum wage, single (66.8%), with higher education (47.9%), practicing some religion (64.2%) and sharing the house with the family nucleus or some relative (67.3%).

In the bivariate analysis, marital status (p=0.002), religious practice (p=0.099) and household arrangement (p=0.005) were the sociodemographic variables that were statistically related to condom use during sexual intercourse. In relation to access to health services, convenience in the BHU opening hours (p=0.000) and access to condoms during the coronavirus/COVID-19 pandemic (p=0.146) were the variables that had a statistically significant association with condom use (Table 1).

Table 1. Bivariate analysis of condom use according to the sociodemographic characteristics and access to health services of the study participants. (n=349). Northeast region, Brazil, 2021. Teresina, Piauí, Brazil.

Variables	Condom use				p-value
	Yes		No		
	n	%	n	%	
Gender identity					0.312*
Man	75	44.6	93	55.4	
Cis man	01	100.0	-	-	
Woman	61	40.1	91	59.9	
Cis woman	08	32.0	17	68.0	
Trans woman	02	100.0	-	-	
Non-binary	-	-	01	100.00	
Sexual orientation					0.850
Bisexual	20	41.7	28	58.3	
Heterosexual	84	42	116	58	
Homosexual	37	40.2	55	59.8	
Others	05	55.6	04	44.4	
Occupation					0.601
Student	91	44.6	113	55.4	
Nurse	11	40.7	16	59.3	
Professor	05	35.7	09	64.3	
Attorney	03	50.0	03	50.0	
Physician	06	85.7	01	14.3	
Others	35	38.5	56	61.5	
Marital status					**0.002**
Single	110	47.2	123	52.8	
Dating	25	41.0	36	59.0	
Married/Living together	09	17.6	42	82.4	
Separated/Widowed	02	50.0	02	50.0	
Schooling					0.320
High School	40	36.0	71	64.0	
Higher Education	75	44.9	92	55.1	
Graduate Studies	31	56.3	40	43.7	
Religious practice					**0.099**
Yes	101	54.9	123	45.1	
No	45	36.0	80	64.0	
Household arrangement					**0.005**
Family/Relative	102	43.4	133	56.6	
Friends	24	57.1	18	42.9	
Partner	06	17.6	28	82.4	
Lives alone	14	36.8	24	63.2	
Where to search information on STIs/AIDS					0.812
Health professionals/ Specialized clinics/TCC/SCS	23	46.9	26	53.1	

Internet	95	42.6	128	57.4	
Family	04	33.3	08	66.7	
Television	21	36.8	36	63.2	
Others	03	37.5	05	62.5	
Search frequency for health services					0.866
Every 2 months	06	33.3	12	66.7	
Every 6 months	38	39.2	59	60.8	
Monthly	05	55.6	04	44.4	
When I need	56	44.4	70	55.6	
Rarely	14	41.2	20	58.8	
Once a year	27	41.5	38	58.5	
Good care received in health services					0.203
Yes	146	41.8	203	58.2	
No	03	30.0	07	70.0	
More or less	55	48.2	59	51.8	
Convenience in the BHU opening hours					**0.000**
Yes	75	50.3	74	49.7	
No	37	50.7	36	49.3	
I only use a private service	33	26.2	93	73.8	
Access to condoms during the coronavirus/COVID-19 pandemic					**0.146**
Difficult	20	45.5	24	54.5	
Impossible	20	50.0	02	50.0	
Unchanged	30	38.5	40	61.5	
Not applicable	25	31.2	55	68.8	

Source: Direct search.
p-value obtained through Fisher's Exact (*) and Chi-square tests.
STI – Sexually Transmitted Infection. TCC/SCS – Testing and Counseling Center/Specialized Care Service; BHU – Basic Health Unit.

Table 2 reveals that condom use during sexual intercourse was associated with knowledge about the serological status for HIV (p=0.147), symptoms suggestive of STIs in the last 12 months (p=0.166), vaccination against hepatitis B (p= 0.124) and knowledge about PrEP (p=0.102).

Table 2. Bivariate analysis of condom use according to health conditions/information. (n=349). Northeast region, Brazil, 2021. Teresina, Piauí, Brazil.

Variables	Condom use				p-value
	Yes		No		
	n	%	n	%	
Current or past STI history					0.218
Yes	09	31.0	20	69.0	
No	137	42.8	183	57.2	
Knowledge about the serological status for HIV					**0.147***
Does not know	61	45.5	73	54.5	
HIV-	85	40.3	126	59.7	
HIV+	-	-	04	100.0	
Ever been tested for HIV/AIDS?					0.232
Yes	94	39.7	143	60.3	
No	52	46.4	60	53.6	
Symptoms in the last 12 months					**0.166**
Discharge with a strong smell	12	27.3	32	72.7	
Pain when urinating or during sexual intercourse	13	40.6	19	59.4	
Genital warts/Vesicles/Wounds	25	40.3	37	59.7	
None	96	45.5	115	54.5	
Vaccinated against hepatitis B					**0.124**
Yes	125	43.9	160	56.1	
No	01	12.5	07	87.5	

Does not know	20	35.7	36	64.3	
Knowledge about PEP					0.726
Yes	93	41.2	133	58.8	
No	53	43.1	70	56.9	
Knowledge about PrEP					**0.102**
Yes	87	45.8	103	54.2	
No	59	37.1	100	62.9	

Source: Direct search.
PEP – Post-Exposure Prophylaxis; PrEP – Pre-Exposure Prophylaxis.
p-value obtained through Fisher's Exact (*) and Chi-square tests.

None of the variables related to the consumption of explicit content presented a statistically significant relationship with condom use (p>0.200) (Table 3).

Table 3. Bivariate analysis of condom use according to consumption of sexually explicit media by the study participants. (n=349). Northeast, Brazil, 2021. Teresina, Piauí, Brazil.

SEM consumption	Condom use				p-value
	Yes		No		
	n	%	n	%	
Habit of viewing pornography					0.999
Yes	82	41.8	114	58.2	
No	64	41.8	89	58.2	
Main form of access					0.621
Free porn sites	74	43.3	97	56.7	
Paid porn sites	02	50.0	02	50.0	
WhatsApp, Twitter, Facebook and other social networks	06	28.6	15	71.4	
Influence of SEM on unprotected sex					0.446
Yes	92	42.2	126	57.8	
No	40	44.9	49	55.1	
I don't know	14	33.3	28	66.7	
Change in the concept of sex after SEM consumption					0.721
Yes	57	56.5	74	43.5	
No	24	37.5	40	62.5	
Agreement in sharing sexual scenes involving risk behaviors					0.286
Yes	21	35.6	38	64.4	
No	125	43.1	165	56.9	

Source: Direct search.
p-value obtained through the Chi-square test.
SEM – Sexually Explicit Media.

With regard to sexual practices, being in a relationship (p=0.000), having a sexual partner (p=0.000), meeting a sexual partner through some app (p=0.001), preventive measures adopted against STIs (p=0.000), use of alcohol (p=0.107) or some illicit drug (p=0.058) when having sex, attending a gay sauna, movie theater, gay bars or other sexual encounters in the last 6 months (p=0.160), having unprotected oral sex (p=0.004), in addition to practicing unprotected anal sex in the last 30 days (p=0.023) and 12 months (p=0.015), knowledge about one's own serological status and the partner's (p=0.109) and number of partners with whom the participants have relations sexual (p=0.020), are variables associated with condom use (Table 4).

Table 4. Bivariate analysis of condom use according to the sexual practices of the study participants. (n=349). Northeast region, Brazil, 2021. Teresina, Piauí, Brazil.

Variables	Condom use				p-value
	Yes		No		
	n	%	n	%	
In a relationship					**0.000**
Yes	63	32.3	132	67.7	
No	83	53.9	71	46.1	
Sexual partner					**0.000**
Steady partner	72	33.6	142	66.4	
Occasional/Casual partner	50	59.5	34	40.5	
Steady and occasional partners	24	47.1	27	52.9	
Meeting sexual partners through some app					**0.001**
Yes	52	54.7	43	45.3	
No	76	34.2	146	65.8	
App used					**0.000***
Facebook/Instagram	62	34.1	120	65.9	
Scruff	15	60.0	10	40.0	
Hornet	04	66.7	02	33.3	
Tinder	41	55.4	33	44.6	
Online chats	0	-	01	100.0	
Others	24	39.3	37	60.7	
Ever made use of PEP?					
Yes	03	23.1	10	76.9	
No	143	42.6	193	57.4	
Prevention measures against STIs during sex					**0.000**
Condom	120	64.9	65	35.1	
Withdrawal method	23	34.8	43	65.2	
Sex without penetration	01	6.2	15	93.8	
Knowledge about my serological status and that of my partners	-	-	30	100.0	
PrEP use	01	33.3	02	66.7	
Others	01	2.0	48	98.0	
Use of alcohol while having sex					**0.107**
Yes	25	37.9	41	62.1	
No	77	47.8	84	52.2	
Sometimes	44	36.1	78	63.9	
Use of some illicit drug while having sex					**0.058**
Yes	12	35.3	22	64.7	
No	127	44.6	158	55.4	
Sometimes	07	23.3	23	76.7	
Already been to a gay sauna, cinema, gay bars or other cruising point in the past 6 months?					**0.160**
Yes	19	52.8	17	47.2	
No	127	40.6	186	59.4	
Sexual activity in the last 6 months					0.944
Anal sex with a person of the same sex	32	38.6	51	61.4	
Oral sex with a person of the same sex	09	45.0	11	55.0	
Vaginal sex with a person of the same sex	01	50.0	01	50.0	
Anal sex with a person of the opposite sex	16	42.1	22	57.9	
Oral sex with a person of the opposite sex	08	44.6	10	55.6	
Vaginal sex with a person of the opposite sex	66	41.0	95	59.0	
I didn't have sex	14	51.9	13	48.1	

Unprotected oral sex					**0.004**
Yes	112	38.5	179	61.5	
No	27	65.9	14	34.1	
Rarely	07	41.2	10	58.8	
Unprotected anal sex in the last 30 days					**0.023**
Yes, as active	06	28.6	15	71.4	
Yes, as passive	03	15.8	16	84.2	
Yes, as active and passive	01	16.7	05	83.3	
No/Does not apply	136	44.9	167	55.1	
Unprotected anal sex in the last 12 months					**0.015**
Yes, as active	27	33.3	54	66.7	
Yes, as passive	08	23.5	26	76.5	
Yes, as active and passive	03	37.5	05	62.5	
No/Does not apply	108	47.8	118	52.2	
Group sex					0.980
Yes	08	42.1	11	57.9	
No	138	41.8	192	58.2	
Knowledge about the last partner's serological status					**0.109**
Yes, HIV+	-	-	02	100.0	
Yes, HIV-	53	33.1	107	66.9	
I don't know	56	43.4	73	56.6	
Sexual intercourse with a person known to be HIV+					0.963
Yes	50	41.7	70	58.3	
No	96	41.9	133	58.1	
Number of partners with whom you had relations in the last 6 months					**0.020**
1-5 partners	133	41.4	188	58.6	
6-10 partners	08	60.0	12	40.0	
10-20 partners	12	70.6	05	29.4	
20+	02	50.0	02	50.0	
					0.343
Do you consider yourself at risk for HIV infection?					
Yes	31	37.3	52	62.7	
No	115	43.2	151	56.8	

Source: Direct search. p-value obtained through Fisher's Exact (*) and Chi-square tests.

In the multivariate model, it was observed that earning incomes greater than the minimum wage increases the chances of using condoms by 12%, and that being single presents 8% more chances of condom use. When being in a relationship, married or with a partner, measures such as ejaculating outside, sex without penetration, knowing one's own serological status and the partners' and using PrEP were protective factors against condom use, as well as difficulties or impossibility accessing condoms during the pandemic (Table 5).

Table 5. Multivariate analysis of condom use among the study participants. (n=349). Northeast region, Brazil, 2021. Teresina, Piauí, Brazil.

Variables	OR_a	95% CI		p-value
		Lower	Upper	
Sociodemographic and cultural characteristics				
Income (+1 minimum wage)	1.121	1.021	1.234	**0.041**
Marital status	0.041	0.002	0.918	
Single/Separated/Widowed	1.080	1.026	1.242	**<0.001**
Dating	0.764	0.649	0.878	**0.039**
Married/Living together	0.236	0.200	0.271	**0.002**

Health conditions/information				
Knows PrEP (Yes)	0.699	0.454	0.974	**0.048**
Sexual practices				
Prevention measures against STIs during sex				
Condom	Ref.	-	-	**-**
Ejaculating outside	0.588	0.500	0.677	**0.039**
Sex without penetration	0.073	0.062	0.084	**<0.001**
Knowledge about my serological status and that of my partners'	0.231	0.196	0.266	**<0.001**
PrEP use	0.550	0.468	0.633	**<0.001**
Access to health services				
	Access to condoms during the coronavirus/COVID-19 pandemic			
Difficult	0.634	0.539	0.729	**0.032**
Impossible	0.344	0.292	0.396	**0.008**
Unchanged	Ref.	-	-	**-**

Source: Direct search.
OR_a=Adjusted Odds Ratio. 95% CI=95% Confidence Interval.

DISCUSSION

The study evidenced that marital status and condom use during sexual intercourse presented a statistically significant association among the participants. People who did not have a steady partner (single, separated and widowed) were more likely to use condoms in their sexual acts. These data are consistent with a trend study carried out in Brazil.[10]

Income greater than one minimum wage increased the chance of using condoms during sexual intercourse. A cross-sectional study carried out in the state of Minas Gerais revealed that family income has a statistical relationship with condom use. This reflects the vulnerability to HIV infection and other STIs to which low-income people are subjected.[11]

Some scholars have already shown that SEM consumption during adolescence is higher when compared to adulthood.[12] One of the reasons that explains this is the limited knowledge about STIs and other approaches referring to sexuality that makes adolescents start to consume more SEM.[13] Access to SEM is legally permitted, which increases their consumption and attracts more viewers.

In relation to the time spent watching erotic scenes, heterosexuals indicate one hour a week[14], whereas gay and bisexual men spend a mean of three hours a week.[15]

Most of the interviewees report using the Instagram and Facebook social networks, although a significant number also report resorting to dating apps such as Tinder and Scruff. These apps are oftentimes used for commercial purposes, especially in the MSM population, which corroborates unprotected sexual practices.[16]

Although knowledge about the serological status exerts an influence on condom use, it was not possible to observe this association among the Northeastern participants of this study. A number of researchers show that increasingly more people are adopting the "serosorting" practice, which consists of a sexual partner selection strategy based on their HIV status, with a view to reducing transmission and infection by the immunodeficiency virus.[17]

Although a large number of participants are aware of PrEP, it is not widely used among the population under study. This is because there is a stigma surrounding the use of prophylaxis, as the fact of carrying and taking antiretroviral drugs can make PrEP users be confused with HIV+ people. In addition to that, many people view PrEP as an exclusive and essential method for gay men, limiting its use in other groups, such as prostitutes and injectable drug users.[18]

Also regarding PrEP, a very curious fact found in the study was that knowledge about this tool reduced the chances of using condoms by 0.699, indicating that people use this method as a substitute for condoms. A study carried out in the USA with the population of gay men and MSM showed that, after six months of PrEP use by the studied sample, the number of unprotected sexual acts increased by 1.3 times.[19]

Practicing the withdrawal method reduces the chance of using condoms, revealing the greater concern with unwanted pregnancies and forgetting that this method does not also prevent STIs, including HIV. The WHO global appeal on the reproductive health of sexually active adolescents through preventive strategies reinforces the need for prevention in sexual relations to prevent unwanted pregnancies,[20] and a

similar fact should happen with prevention against STIs. Use of alcohol and other drugs during sexual intercourse, number of partners, the protection strategies adopted and fetishization of the anal sex practice deserve attention, which have considerably increased the chances of engaging in unprotected sex, especially during the pandemic period, in which risky sexual practices were seen as "a moment of escape from reality" and "relaxation".[21]

Some previous research studies have already shown a relationship between the increase in unplanned sex and higher prevalence of STIs with use of substances, whether licit or illicit, as well as the adoption of riskier sexual practices.[22,23] These practices, considered risky, were associated with condom use, which would be a causal factor for the increase in the STI rates. Some scholars have evidenced that, even during the pandemic, both the heterosexual and homosexual population left the house in search of sex, which denotes the superiority of sexual compulsion to the detriment of the social isolation imposed by the COVID-19 pandemic.[24]

Convenience in the BHU opening hours and access to condoms during the pandemic period maintained an association with condom use, where individuals with difficult access having their chances of using condoms reduced by 0.634, and the chances of those who were unable to receive such protection was 0.344. A study points out that the pandemic hampered health care, such as scheduling appointments, carrying out tests and dispensing medications, in addition to highlighting the low demand for services during the period experienced.[25]

One of the study limitations identified corresponded to the fact that all the information was self-reported and subjected to memory bias. In addition to that, for being an online survey, there may be difficulties understanding the questions and consequent misunderstandings in the answers.

As a contribution to the Nursing area, this study will serve to support approach strategies during HIV/AIDS consultations, with a focus centered on each individual and their determinants.

CONCLUSION

Consumption of sexually explicit media was not associated with condom use. However, some measures used to prevent STIs (withdrawal method, sex without penetration, knowledge about the partner's serological status and PrEP use) reduced the chances of using condoms during sexual intercourse, evidencing lack of understanding about the importance of combined prevention. In turn, this can contribute to increased transmission of sexual infections, including HIV/AIDS.

This study, as well as others already carried out on the influence of SEM on the sexual behavior of the population, only considered the practice of unprotected sex, excluding other forms of combined prevention. Thus, further studies are recommended to evaluate the relationship between the choice of other sexual practices and prevention means, including combined prevention and SEM consumption.

Thus, health professionals, including nurses, are protagonists in carrying out health promotion activities, including detection of vulnerabilities, early diagnosis and treatment, in addition to counseling individuals exposed to these conditions.

CONTRIBUITIONS

Conception or design of the study: Araújo TME. Data collection: Chaves AFCP, Sousa ECCL, Almeida PD. Data analysis and interpretation: Chaves AFCP, Sousa ECCL. Writing of the article or critical review: Chaves AFCP, Araújo TME, Sousa ECCL, Almeida PD, Nunes RV, Lulendo EM. Final approval of the version to be published: Chaves AFCP, Araújo TME, Sousa ECCL, Almeida PD, Nunes RV, Lulendo EM.

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