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Factors Associated with Condom Use in Vaginal Intercourse Among Spanish Heterosexual and Bisexual Men

Vicente Morell-Mengual[1] · María Dolores Gil-Llario[1] · Estefanía Ruiz-Palomino[2] · Jesús Castro-Calvo[3] · Rafael Ballester-Arnal[2]

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Abstract

Introduction In Spain, the sexual route is the main route of transmission in new HIV diagnoses. Men who have heterosexual relations are the second group with the highest incidence of new HIV cases and have the highest rates of late diagnosis in Spain. Planning the response to the HIV epidemic requires specific and updated information on this group. This study aims to analyze sexual practices and frequency of condom use in heterosexual and bisexual men and identify variables that explain inconsistent condom use in vaginal intercourse.

Methods The sample consists of 386 men between 18 and 57 years of age ($M = 24.61$; SD = 6.74).

Results The results indicate that the percentage of consistent condom use in vaginal intercourse is 64.9%. Not consuming drugs before sexual intercourse, perceiving a high self-efficacy for condom use, and good assertive communication skills are factors that positively influence condom use. In contrast, a high level of sexual compulsivity is a risk factor. The proposed model explains between 29.1% and 40% of the variance.

Conclusions and Policy Implications.

Preventive actions implemented in this group should include work sessions that focus on developing assertive skills, reducing risks associated with drug use, and providing cognitive strategies to cope with compulsive sexual thoughts.

Keywords VIH · Heterosexual · Bisexual · Men · Condom use · Vaginal intercourse

Introduction

The human immunodeficiency virus (HIV) constitutes one of the leading public health problems different countries face. The latest statistics indicate that 38 million people live with HIV worldwide, with a rather stable annual rate of 1.7 million new infections (UNAIDS, 2020). In Spain, the rates of new HIV diagnoses are slightly higher than the average for European Union and Western European countries (Plan Nacional sobre Sida & Centro Nacional de Epidemiología, 2019). According to the latest epidemiological data, heterosexual men constitute the second most affected population group by HIV, following men who have sex with men, with a prevalence of 0.4%. They represent 14.6% of all new diagnoses and 54.7% of new diagnoses among heterosexuals (National AIDS Plan & National Epidemiology Center, 2019).

Heterosexual men also constitute the group with the highest percentage of late diagnosis with the presence of a CD4 figure below 350 cells/μL in the first measurement after diagnosis (Plan Nacional sobre Sida & Centro Nacional de Epidemiología, 2019). This high percentage of men who are unaware of their serological status, together with the high viral load reached before diagnosis, shows the need to implement preventive strategies that encourage the use of barrier methods. However, several studies still indicate relatively low rates of consistent use. An investigation analyzing the perceived pros and cons towards condom use conducted in a sample of Spanish heterosexual men found that 54.7% have had, at least once, unprotected vaginal intercourse during

✉ Vicente Morell-Mengual
vicente.morell@uv.es

[1] Department of Developmental and Educational Psychology, University of Valencia, Valencia, Spain

[2] Department of Basic and Clinical Psychology and Psychobiology, Jaume I University, Castellon, Spain

[3] Department of Personality, Evaluation and Psychological Treatment, University of Valencia, Valencia, Spain

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the last month with sporadic partners (Prat et al., 2016). Accordingly, another recent study conducted with a sample of young Spanish men concludes that 40.3% report inconsistent condom use in the practice of vaginal intercourse with sporadic partners (Ruiz-Palomino et al., 2020). These results are consistent with the data collected in a very recent study that analyzes a trend of condom use in Spanish young people over the two past decades, 1999–2020 (Ballester-Arnal et al., 2022).

In recent years, several explanatory models for sexual risk behavior have been proposed, such as the Information, Motivation and Behavioral Skills Model (Fisher & Fisher, 1992), the Health Belief Model (Becker & Maiman, 1975), the Theory of Planned Behavior (Ajzen, 1991), or Social Cognitive Theory (Bandura, 1994). The variables collected in the models constitute key elements for designing preventive actions adapted to the psychosocial reality of men who have sex with women (Green et al., 2019). In particular, these models highlight the relevance of self-efficacy, sexual assertiveness, knowledge, attitudes, and perception of risk and severity, among other variables. Numerous studies have confirmed the usefulness of these variables in explaining condom use among these men (Bahrami & Zarani, 2015; Jones et al., 2018; Teye-Kwadjo et al., 2017). Regarding behavioral skills, several studies indicate that self-efficacy and assertive communication skills constitute not only direct predictors of condom use (Ballester et al., 2013; Uribe-Alvarado et al., 2017) but also explanatory variables for the prevalence of condom use after the implementation of preventive strategies (Whiting et al., 2019). The level of knowledge is a crucial element for adopting preventive strategies (Ballester-Arnal et al., 2017a, b). Specifically, this variable is related both to the systematic use of condoms (Liang et al., 2020), the presence of positive attitudes, and the ability to negotiate their use (Gil-Llario et al., 2018). Regarding attitudes, believing that HIV constitutes a normalized disease that does not carry major negative consequences and perceiving a low probability of becoming infected decreases consistent condom use and antibody testing (Mena-Chamorro et al., 2020; Nkwonta & Harrison, 2021; Warren et al., 2018).

Despite the usefulness of the classic models, the scientific literature has identified other emotional, affective, and behavioral variables that influence sexual behavior. Regarding affective-emotional variables, homophobic beliefs that relate HIV to the homosexual collective could construct a variable that explains the non-systematic use of condoms (Plummer, 2013). Homophobia has typically been conceptualized as a reflection of hostility toward homosexual and bisexual people and includes two components reflecting implicit and explicit attitudes. Thus, some heterosexual men with high levels of homophobia could avoid using condoms because they consider their social circle and heterosexual relationships to be safe environments, without HIV risk (Flood, 2003). However, the relationship between some affective-emotional variables and sexual risk behavior shows contrasting results. Whereas some studies establish the existence of a negative correlation between depressive symptomatology and the frequency of condom use (Hurtado-de-Mendoza-Zabalgoitia et al., 2017; Morokoff et al., 2009), other studies conclude that there would only be an indirect mediation through other constructs such as self-efficacy (Ballester-Arnal et al., 2017a, b). In terms of self-esteem, some studies conclude that men with a low level of self-esteem would adopt more risky sexual behaviors (Ellis, 2014). On the contrary, other studies show that men with a higher level of self-esteem would be the ones who would avoid using condoms to a greater extent (Ramiro et al., 2013). Finally, other studies find no correlation between both variables (Ruiz-Palomino et al., 2020).

Regarding behavioral variables, a large number of men have sex under the influence of alcohol or other drugs. Sometimes these substances are consumed before sexual intercourse, and in other cases, their consumption continues during sexual activity (Davis et al., 2020). Thus, several studies indicate the existence of a strong relationship between drug use and inconsistent condom use (Scott-Sheldon et al., 2016), although the degree of this correlation varies depending on the type of drug (McKetin et al., 2018; Moure-Rodríguez et al., 2016). Sexual sensation seeking and sexual compulsivity also constitute two intrinsically linked and significant predictors of risk behavior (Ruiz-Palomino et al., 2020). Generally, men with high levels of compulsivity and sensation seeking engage in relationships with multiple partners (Ballester-Arnal et al., 2013; Liao et al., 2015), have sex under the influence of alcohol (Thorpe et al., 2020), do not use condoms during vaginal or anal intercourse (Ballester-Arnal et al., 2017; Ballester-Arnal et al., 2017), and have higher STI incidence rates (Ni et al., 2021).

In the field of HIV prevention, there is still no clear consensus on which variables explain condom use in the practice of vaginal intercourse with sporadic partners. Reducing incidence requires a thorough understanding of the different factors involved in order to design preventive strategies adapted to current times and sexual dynamics. This study includes and analyzes several previously understudied variables (alcohol, cannabis, and other drug use; depressive symptomatology; explicit and implicit homophobic attitudes; HIV knowledge; perceived HIV vulnerability and severity; self-efficacy; self-esteem; sexual assertiveness; sexual compulsivity; and sexual sensation seeking). Therefore, the aims of this study are as follows: to conduct a descriptive analysis of the frequency of condom use; to examine the association of several variables on condom use during vaginal intercourse with sporadic partners; and to

identify the combination of variables that best explain consistent condom use. The following hypotheses have been established:

1. Fifty-five percent of men will not use condoms consistently during vaginal intercourse.
2. Men who report inconsistent condom use will have higher scores on sexual sensation seeking, sexual compulsivity, drug use, depressive symptomatology, and homophobia. In contrast, they will score lower on self-esteem, knowledge, self-efficacy, sexual assertiveness, perceived vulnerability, and perceived HIV severity.
3. The combination of the variables described above will correctly predict a high percentage of men with inconsistent condom use.

Methods

Participants

The sample consisted of 386 men (330 heterosexuals and 56 bisexuals) between 18 and 59 years of age, with a mean age of 25.61 years (SD = 7.74) and the most frequent ages from 20 to 29 years (61.9%) and from 18 to 20 years (16.8%). The sample resides in different parts of Spain, with 60.4% living in the central-Western area, 12.1% in the Central-Eastern area, 8.8% in the North, 7% in the Levante area, 6.5% in the South area, and 5.2% in the East area. Regarding the educational level, 49.6% have university studies (47.8% have a bachelor's or postgraduate degree and 1.8% have a doctorate), 48.6% have secondary studies, and only 1.8% have primary studies. With regard to the partner situation, 58.8% refer to being single and 41.2% had a stable relationship at the time of the assessment. Table 1 shows the demographic characteristics in greater detail.

Instruments

Cognitive Variables

- CPS (AIDS Prevention Questionnaire) (Gil-Llario et al., 2018). This instrument contains 44 statements designed to gather the various components considered relevant in various HIV prevention models: knowledge about HIV, safe sexual behavior, fear of HIV infection, perceived susceptibility, attitudes toward condoms, intentions about condom use, and stigma and discrimination toward people living with HIV. In particular, for this study, we have only used the items related to safe behaviors, knowledges, and perception of HIV-AIDS severity. Internal consistency, tested with Cronbach's alpha, showed acceptable reliability for the different components, ranging from 0.67 to 0.74.

Table 1 Sample characteristics

	Total ($n = 386$)	Heterosexual ($n = 330$)	Bisexual ($n = 56$)
Age			
Between 18 and 20 years old	16.8%	17%	16.1%
Between 20 and 39 years old	61.9%	62.7%	57.1%
Between 30 and 39 years old	12.7%	12.5%	14.3%
Between 40 and 49 years old	5.4%	4.8%	8.9%
Between 50 and 60 years old	3.1%	3%	3.6%
Residence area			
North region	8.8%	10%	7.1%
South region	6.5%	5.8%	8.9%
East region	5.2%	5.5%	5.4%
Central-western region	60.4%	59.1%	58.9%
Central-Eastern region	12.1%	11.7%	14.2%
Levante	7%	7.9%	5.5%
Educational level			
Primary schooling	1.8%	2.1%	0%
Secondary schooling	48.6%	47.6%	53.5%
Bachelor or Master Degree	47.8%	49.1%	41.1%
PhD	1.8%	1.2%	5.4%
Steady partner			
Yes	58.8%	61.2%	44.6%
No	41.2%	38.3%	55.4%

- EBAP (Brief Condom Use Self-Efficacy Scale) (Gil-Llario et al., 2019). This scale is a 7-item, Likert-type measure that assesses different skills related to the use of condom like, impulse control (IC), acquisition and negotiation (AN), and fear of rejection (FR). The EBAP has a Likert response scale wherein items are answered on a 5-point scale ranging from 1 (completely disagree) to 5 (completely agree). The score ranges from 2 to 10 in IC and AN scales and from 3 to 15 in FR scale. The internal consistency of the original Spanish version is 0.71.

Behavioral Variables

- SSSS (Sexual Sensation Seeking Scale) (Ballester-Arnal et al., 2018; Kalichman & Rompa, 1995). This instrument contains 11 statements to evaluate the personality disposition to seek novel sensation on sexual context. The answers range from 1 not at all like me to 4 very much like me. The score ranges from 4 to 16 in new experiences seeking factor and from 7 to 28 in physical sensations attraction factor. The Spanish adaptation used for this study has an internal consistency of 0.76 in physical sensations attraction factor and 0.82 in new experiences seeking factor.
- SCS (Sexual Compulsivity Scale) (Ballester-Arnal et al., 2013; Kalichman & Rompa, 1995). This self-report assesses the personality disposition to sexual disinhibition and impulses through 10 items using a 4-point Likert-type scale, ranging from 1 (not at all like me) to 4 (very much like me). The score ranges from 5 to 20 in interference of sexual behavior factor and from 5 to 20 in failure to control sexual impulses factor. The internal consistency of the Spanish version used for this study is 0.81.
- SAS (Pregnancy and STD Prevention Assertiveness Subscale) (Morokoff et al., 1997; Sierra et al., 2011). This subscale of the sexual assertiveness scale specifically targets communication and negotiation skills related to condom use. It includes six items answered on a 5-point Likert-type scale ranging from 0 (never) to 4 (always). The subscale score ranges from 0 to 24 points. The Spanish adaptation used in this study shows rigorous internal consistency ($\alpha = 0.85$).
- Alcohol, cannabis, and other drug use. Three self-rating items are used to assess the use of alcohol, cannabis, or other drugs during sex in the past six months: Do you have sex after drinking alcohol? Do you have sex after smoking cannabis? and Do you have sex after using other drugs? Responses are recorded using a dichotomous format: yes or no.

Affective-Emotional Variables

- CES-D (Center for Epidemiological Studies of Depression Scale) (Herrero & Gracia, 2007; Radloff, 1977). This instrument contains 7 statements designed to evaluate four aspects related to depressive symptomatology (dysphoric mood, decrease in concentration, loss of pleasure, and difficulties with sleep). Four response options were provided: not at all or less than 1 day, 1–2 days, 3–4 days, and 5–7 days. The total score ranges from 0 to 21 points. The internal consistency of the validated Spanish version is 0.82.
- RSES (Rosenberg Self-Esteem Scale) (Martín-Albo et al., 2007; Rosenberg, 1965). This is a 10-item questionnaire designated to assess positive and negative evaluations of oneself. All items were responded to on a 4-point Likert-type scale ranging from 1 (strongly agree) to 4 (strongly disagree). The total score ranges from 10 to 40 points. The version used in this study is the Spanish adaptation, which has an internal consistency of 0.85.
- HSM (Subtle and Overt Homophobia Scale) (Quiles et al., 2003). This is a 17-item questionnaire that assesses two dimensions related to overt and subtle experiences of discrimination against homosexual people. All items were responded to on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The score ranges from 10 to 70 on the overt homophobia scale and from 7 to 49 on the subtle homophobia scale. Internal consistency of the original Spanish version, tested with Cronbach's alpha, showed good reliability for each scale, ranging from 0.71 to 0.78.

Procedure

Participants were recruited online through purposive sampling. Firstly, telematic contact was established with various groups, associations, and universities (e.g., Instituto de la Juventud, Federación de Estudiantes, Cruz Roja, among others), providing them with information about the study and requesting their collaboration in distributing the questionnaires. The associations interested in collaborating published, through their websites or social networks (mainly Twitter and Facebook), a message with information about the study and a link to the battery of questionnaires. An initial page explained the use of the data provided and collected the informed consent. From the beginning, they were informed that the anonymity and confidentiality of the data were guaranteed. Participation was voluntary, and no remuneration was given. This study followed the guidelines of the Declaration of Helsinki and the Personal Data Protection Law (Organic Law 15/1999).

Analysis of Data

First, descriptive analyses were conducted to characterize participants regarding their sexual behavior and frequency of condom use. Secondly, a comparative analysis of the scores for the different variables according to the level of risk was carried out using Chi-square tests (categorical variables) and Student's *t*-tests (continuous variables). The selection of the variable to form the groups was made, taking into account the biological risk involved in each sexual practice and its frequency with sporadic partners. The variable selected was the frequency of condom use during vaginal intercourse, since this behavior constitutes one of the highest risk behaviors for HIV infection and is practiced by most men who have sporadic sexual relations (72.4%). This variable was assessed by item 35 of the AIDS Prevention Questionnaire (Gil-Llario et al., 2018): "How often have you used a condom in vaginal intercourse with sporadic partners." Given that the only safe behavior against HIV infection is the systematic use of condoms and the response options were "never," "sometimes," "quite often," or "always," two groups were formed: one composed of those who report consistent condom use (CCU) and the other of those who use condoms inconsistently or never (ICU). Finally, a binary logistic regression analysis was conducted using the forward method (Wald) to estimate the relationship between the frequency of condom use and the variables analyzed above. To do this, a dichotomous variable is generated where the value 0 is assigned to preventive behavior (consistent condom use) and the value 1 is assigned to risk behavior (inconsistent condom use).

Results

Sexual Behavior and Condom Use

The most frequently performed sexual practice is oral sex, referred to by 84.9% of the men, followed by vaginal intercourse, with a percentage of 72.4%. Anal intercourse and anilingus occupy third and fourth place with percentages of 23.3% and 10.9%, respectively. It should be highlighted that 50.2% refer to other types of sexual practices different from those described above, like the use of sex toys or mutual masturbation, among others. With regard to the frequency of condom use, the data reveal that a high percentage of men do not systematically use this prevention method when they have sex with sporadic partners. The practice with the least condom use is oral sex (2.8%), followed by anal intercourse (63.6%) and vaginal intercourse (64.9%).

Differential Analysis Between Men with Consistent or Inconsistent Condom Use

For cognitive variables (see Table 2), men who consistently use condoms (CCU) have a higher level of self-efficacy, with statistically significant differences in two of the three components assessed: fear of rejection ($p = 0.001$) and impulse control ($p = 0.001$). In contrast, there were no significant differences based on the frequency of condom use in the other variables assessed: level of knowledge ($p = 0.781$), perceived vulnerability ($p = 0.237$), perceived fear ($p = 0.703$), and perceived HIV severity ($p = 0.660$).

Regarding behavioral variables, men with CCU have a higher level of sexual assertiveness than those who report inconsistent condom use (ICU), and this difference is statistically significant ($p = 0.001$). In addition, those with CCU also report significantly lower consumption of alcohol (75% vs. 62.6%), cannabis (23.8% vs. 12.3%), and other drugs (13.1% vs. 1.3%) than men with ICU. In contrast, men with ICU scored significantly higher on seeking new experiences ($p = 0.001$), a specific feature of sexual sensation seeking, and interference ($p = 0.033$), a component of sexual compulsivity.

Finally, focusing on the affective-emotional variables, men with ICU have higher levels of homophobia than men with CCU. However, these differences are only statistically significant in the factor of explicit homophobia ($p = 0.029$) but not in the factor of implicit homophobia ($p = 0.134$). Depressive symptomatology and level of self-esteem did not present significant differences between both groups.

Associated Variables for Inconsistent Condom Use

A logistic regression analysis was carried out using the forward method (Wald) to determine which variables influence inconsistent condom use during vaginal intercourse. The results of the omnibus test of model coefficients ($\chi 2 = 82.153$; $p = 0.001$) and the Hosmer and Lemeshow test ($\chi 2 = 10.518$; $p = 0.231$) were statistically significant, indicating goodness of fit of the proposed model. The Cox and Senell (0.291) and Naglekerke R-squared (0.400) values determine that the model explains between 29.1% and 40% of the variance in the dependent variable. Furthermore, it should be highlighted that this model can correctly classify 76.6% of the cases, with a specificity of 89.7% and a sensitivity of 52.4%.

As Table 3 shows, a high level of sexual assertiveness (OR = 0.875), not consuming cannabis or other drugs before or during sexual intercourse (OR = 0.153), a high level of self-efficacy related to the ability to acquire condoms (OR = 0.805), not perceiving barriers associated with their use (OR = 0.843), and feeling capable of suggesting their use without fear of rejection (OR = 0.766) constitute protective

Table 2 Scores in the different variables according to condom use frequency

	Score range	ICU		CCU		t or X^2	d or V
		M or %	SD	M or %	SD		
HIV knowledge (CPS)		10.18	1.75	10.25	1.79	t = -.276	d = .04
Perceived vulnerability to HIV (CPS)	0–100	17.55	19.94	14.54	16.10	t = 1.265	d = .17
Perceived fear to HIV (CPS)	0–100	58.56	38.06	56.62	36.34	t = .388	d = .05
Perceived severity HIV (CPS)	0–4	3.01	0.73	2.98	0.56	t = .399	d = .05
Fear of rejection (EBAP)	3–15	12.17	2.62	13.79	1.78	t = 5.063***	d = .72
Impulse control (EBAP)	2–10	6.25	2.59	7.74	1.89	t = 4.634***	d = .66
Acquisition and negotiation (EBAP)	2–10	8.61	1.64	8.65	1.64	t = .203	d = .02
Self-esteem (RSES)	10–40	33.07	5.87	33.33	5.63	t = -.333	d = .05
Depressive symptomatology (CES-D)	0–21	5.43	4.41	6.03	4.61	t = -.984	d = .13
Implicit Homophobia (HSM)	7–49	22.36	8.48	20.68	7.32	t = 1.503	d = .21
Explicit Homophobia (HSM)	10–70	30.43	11.97	26.99	8.21	t = 2.214*	d = .34
Sexual assertiveness (SAS)	0–24	11.10	5.59	17.37	6.26	t = -7.679***	d = 1.06
Interference of sexual behavior (SCS)	5–20	7.94	3.51	7.03	2.26	t = 2.442*	d = .31
Control Sexual Impulses (SCS)	5–20	8.89	3.29	8.21	2.53	t = 1.764	d = .23
New Experiences Seeking (SSSS)	4–16	19.86	4.79	17.60	4.02	t = 3.868***	d = .51
Physical Sensations Attraction (SSSS)	7–28	8.52	2.79	8.45	2.54	t = .221	d = .26
Alcohol during sex (yes)	–	75%	–	62.60%	–	X^2 = 3.797*	V = .13
Cannabis during sex (yes)	–	23.8%	–	12.3%	–	X^2 = 5.323*	V = .15
Other drugs during sex (yes)	–	13.1%	–	1.3%	–	X^2 = 14.760***	V = .25

*$p < .05$; ***$p < .001$; *ICU* inconsistent condom use, *CCU* consistent condom use

factors. Of all these variables, not consuming drugs before or during sexual intercourse increased the probability of using a condom during vaginal intercourse with sporadic partners by 84.7%. On the other hand, a high level of sexual compulsivity is a risk factor (OR = 1.142).

Discussion

Currently, HIV rates in heterosexual men constitute 18% of newly reported cases (Plan Nacional sobre Sida & Centro Nacional de Epidemiología, 2019). This study aims to improve the effectiveness of preventive strategies and adapt them to the current social and cultural context to determine what percentage of heterosexual men still report inconsistent condom use and what variables could act as risk and protective factors when adopting preventive behaviors.

The frequency of systematic condom use during vaginal intercourse observed in our study is higher than the percentages reported in other studies conducted with men who practice heterosexual intercourse (Blanc & Rojas, 2018; Prat et al., 2016). These usage rates are insufficient and lower percentages than those reported by heterosexual women (Ruiz-Palomino et al., 2020; Velo-Higueras et al., 2019). Overall, men perceive the possibility of an unwanted pregnancy to be more likely than an infection by HIV or other STIs (Ballester et al., 2009). This belief could confirm the hypothesis that men attribute responsibility for condom use to women (Fleming et al., 2016). Dalessandro et al. (2019) claim that men are often silent about condom use, attributing

Table 3 Multiple regression logistic analysis

	β	ET	Wald	Gl	Sig	Exp (β)	IC 95% for (β)	
							Inferior	Superior
Acquisition and negotiation (EBAP)	-.216	.110	3.877	1	.049	.805	.649	.999
Impulse control (EBAP)	-.171	.077	4.993	1	.025	.843	.725	.979
Fear of rejection (EBAP)	-.267	.084	10.167	1	.001	.766	.650	.902
Sexual assertiveness (SAS)	-.134	.028	23.074	1	.001	.875	.828	.924
Interference of sexual behavior (SCS)	.133	.058	5.251	1	.022	1.142	1.019	1.279
Other drug consumption	-1.874	.817	5.261	1	.022	.153	.031	.761

the responsibility to women for condom use as well as seeking for abortion services as a last resort.

As for the differential profile, men who inconsistently use condoms present greater explicit homophobic attitudes in line with findings from other studies (Plummer, 2013). Implicit homophobia includes attitudes socially more accepted and less abrupt. Conversely, explicit homophobia includes attitudes based on discrimination, verbal abuse, and name calling. These men likely believe that the probability of HIV infection in heterosexual intercourse is very low. In this regard, those practices traditionally associated with homosexual men are perceived as lower risk than those associated with homosexual men. A recent study concluded that 99% of young heterosexual men believe that vaginal intercourse can transmit HIV if a condom is not used, but this percentage drops to 85.5% when asked about anal intercourse (Ballester et al., 2009). Men who avoid condom use are also characterized by increased use of alcohol, cannabis, and other drugs before sexual intercourse (McKetin et al., 2018; Scott-Sheldon et al., 2016). Generally, drugs reduce cognitive abilities, making it harder to set limits and protect oneself (García et al., 2017). Focusing on the prevention of HIV or other STIs requires many cognitive resources, and, in general, when under the influence of any narcotic substance, preventive behavior is less likely to be adopted (Ruiz-Palomino et al., 2020).

The present study also shows that men who do not use condoms experience strong interference with sexual behavior and a high need to seek novel sexual experiences. Men with higher sexual sensation-seeking scores typically engage in activities that provide intense and unusual experiences, underestimating the risks involved (Kalichman & Rompa, 1995; Thorpe et al., 2020). Generally, these individuals prefer the immediate reinforcement of condomless sex to the long-term negative consequences of such behavior (Santos et al., 2018). On the other hand, people with high sexual compulsivity are characterized by strong sexual disinhibition and poor sexual impulse control (Kraus et al., 2018). These men have difficulty controlling their sexual urges and pausing at the moment of peak arousal to put on a condom (Liao et al., 2015), despite knowing the negative consequences of such behavior.

In contrast, men who regularly use condoms have high self-efficacy and good assertive communication skills. This finding is consistent with the results obtained by other studies analyzing the same variables (Uribe-Alvarado et al., 2017). Generally, these men present a strong conviction of the need to use condoms despite their partner's pressures to avoid its use (Addoh et al., 2017). They also have greater comfort and security when putting on a condom, even in situations that may complicate its use, such as when they have sex under the influence of alcohol or other drugs or at the peak of sexual arousal (Ballester et al., 2013; Ballester-Arnal et al., 2017a, b).

Finally, it should be highlighted that the results obtained show that some of the variables analyzed, such as depressive symptomatology, self-esteem, or perceived vulnerability to HIV, do not show significant differences between those who use or do not use condoms systematically. Therefore, it could be concluded that these variables would not be related to sexual risk behavior in men with heterosexual practices (Ruiz-Palomino et al., 2020). As opposed to this finding, there is a possibility that the relationship between these variables was not established directly but was mediated by other factors that are more closely related to preventive behavior, such as self-efficacy or sexual compulsivity (Ballester-Arnal et al., 2017a, b; Foley et al., 2019).

Logistic regression analysis indicates that some cognitive and behavioral variables predict condom use. Sexual compulsivity and, specifically, the inability to regulate sexual thoughts is the only risk factor. These men characteristically display a significant inability to regulate their level of sexual arousal, resulting in situations in which they may lose control (Kraus et al., 2018). In general, they are unable to take time to assess the situation and consider the advantages and disadvantages associated with the systematic use of condoms. As such, this marked lack of impulse control may interfere with the ability to regulate behavior and, in turn, interfere with the capability of stopping at peak arousal and putting on a condom, negotiating desired sexual behaviors, and refusing to engage in sex when condoms are not available (Gullette & Lyons, 2005; McBride et al., 2008).

Engaging in sexual intercourse without being under the influence of drugs other than alcohol or cannabis is a protective factor. When a person's cognitive skills are in optimal condition, they are more capable of assessing risks and adopting preventive measures (Velo-Higueras et al., 2019). Moreover, being under the influence of this type of substances favors that some shy people can establish a sexual interaction that they do not want to miss, even if they do not have condoms (Berry & Johnson, 2018). Additionally, having good assertive communication skills and a high level of self-efficacy, two variables included in the Information, Motivation and Behavioral Skills Model (Fisher & Fisher, 1992) and Social Cognitive Theory (Bandura, 1994) are also protective factors. Men who engage in positive sexual interactions are more likely to propose and negotiate the use of condoms and to reject any unwanted sexual activity (Morokoff et al., 2009). However, these men possess adequate assertive skills and perceive themselves as capable of putting them into practice when acquiring and negotiating condom use in the face of possible inconveniences or difficulties that may arise (Ballester et al., 2013). According to Leddy et al. (2016), people who lack an adequate level of self-efficacy do not handle situations effectively despite knowing what to do and possessing the necessary skills.

Strengths and Limitations

This study has some methodological limitations. The use of questionnaires and self-reported instruments may lead to some socially desirable responses that negatively affect the reliability and validity of the data. In addition, because of the cross-sectional design, the causal relationships among the variables should be interpreted with caution. In future studies, it would be advisable to design a longitudinal research to confirm the causality of the current findings. There is a slight dispersion in the sample on age too. In future studies, it would be advisable to analyze if age can modulate the influence that some psychological variables have on risk behavior. Besides, the groups were established according to the systematic use of condoms in vaginal intercourse, prioritizing the most common sexual practice reported over that with the highest biological risk. Anal intercourse was not included because, although it was the practice with the highest risk, it was only reported by a small percentage of men. In future studies, it would be advisable to increase the sample size to determine whether the variables associated with condom use in vaginal intercourse are the same as in anal intercourse or, on the contrary, whether there are significant changes.

Conclusions, Contribution, and Practical Implications

The sexual route is the main route of transmission in new HIV diagnoses. Therefore, without ignoring other transmission routes, it is necessary to design and implement effective actions to prevent transmission through this route, adapting them to the distinctive characteristics of each population group. Men with heterosexual practices constitute a group that, despite not being the first in terms of the transmission routes in the overall set of data, presents high rates of late diagnosis. This can lead to a higher number of people being infected by the same person, through inconsistent use of condoms, due to a high viral load in the blood. However, efforts to reduce the incidence of new HIV cases in this group are limited due to the lack of specific research that analyzes the variables associated with sexual risk behavior since most studies are conducted with men who have sex with men. However, the total eradication of HIV and other STIs implies working indiscriminately with all the groups and transmission routes involved. For this reason, the main contribution of this study is that it proposes an explanatory model that brings together several behavioral and cognitive variables associated with inconsistent condom use in Spanish men who engage in heterosexual vaginal intercourse with sporadic partners. The model obtained shows not consuming drugs prior to sexual intercourse; the presence of good assertive communication skills; and a high level of self-efficacy are protective variables that increase the probability of condom use; in contrast, the presence of high sexual compulsivity that prevents or interferes with the regulation of sexual thoughts is a risk variable. In terms of practical implications, preventive actions should consider each person's judgments about their capabilities, based on which they will or will not use condoms, and training in skills that allow them to initiate sexual activity, refuse any unwanted sexual practices, and use appropriate preventive methods. Risk reduction strategies associated with drug use should also be provided. Finally, some self-management strategies should be developed to improve the control of sexual impulses and interference over sexual behavior.

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Declarations

Ethics Approval The study was approved by the Ethics Committee of University of Valencia and was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments.

Consent to Participate Participants were informed about the objectives of the survey, completion times, benefits, and risks, as well as about the anonymity of the responses and the right to stop the survey in any point and for any reasons.

Conflict of Interest The authors declare no competing interests.

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