

Sociodemographic and Psychosexual Characteristics of Students from a Spanish University Who Engage in Casual Sex

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Abstract Casual sexual relations, understood as those in which there are no expectations of affective commitment, are increasingly common among youth. The goal of this study was to analyze the casual sexual behavior of students from a Spanish university, paying special attention to its relation with sociodemographic and psychosexual variables. Participants were 659 students from a Spanish university aged between 18 and 26 years, without a partner or being in a partner relationship of less than 12 months, who completed a battery of online questionnaires. It was found that about half of the participants had engaged in casual sex in the past year, with no differences as a function of gender. Engaging in casual sex was related to being older, less religious, performing risky sexual behaviors, and other psychosocial variables such as attitudes towards condoms, sociosexuality, and measures of personal well-being. The discussion highlights the need to conduct more research on casual sexual relations, due to the possible influence of cultural aspects in youth's sociosexuality.

Keywords Casual sex · Sociosexuality · Casual sexual relationships · University students · Emerging adulthood

Casual sexual relations have become commonplace in university campuses. It is estimated that between 60 and 80% of the American university population has engaged in some casual sex in their lifetime (García et al. 2012; Kuperberg and Padgett

2016; Paul et al. 2000). During just one semester, about 50% of the students who did not have a romantic partner admitted having engaged in casual sex (Olmstead et al. 2013; Owen et al. 2011). The most prevalent type of behavior in these contacts is kissing, although vaginal sex, masturbation, and oral sex also are common practices (Fielder and Carey 2010b; Olmstead et al. 2013). Regarding the type of partner, contacts with friends or acquaintances are usually more frequent than with strangers (Grello et al. 2006; Lewis et al. 2012). Moreover, the greater the relational proximity, the more intimate is the contact (Grello et al. 2006).

A large number of studies have examined possible predictors of casual sex (see Claxton and van Dulmen 2013; García et al. 2012) from different theoretical perspectives (Berntson et al. 2014; Fielder and Carey 2010a; Fielder et al. 2013). The relevance of gender and religiosity has been underlined. With regard to gender, the results are inconclusive, with some studies indicating that men engage in more casual sex than women do (Berntson et al. 2014; Kuperberg and Padgett 2016; Townsend and Wasserman 2011), whereas others have not found these differences (Fielder and Carey 2010a; García et al. 2012; Penke and Asendorpf 2008). Greater religiosity has been negatively associated with casual sex, especially with the degree of intimacy of such relationships (Claxton and van Dulmen 2013; Fielder et al. 2013).

Prior sexual behavior also plays an important role. Having engaged in casual sex before entering the university and the number of causal partners have both been shown to be good predictors of casual sex during the university stage (Olmstead et al. 2013; Owen et al. 2011). Engaging in casual sex has also been found to be related to causal sexual behavior in the next 5 years, indicating a constant behavioral pattern (Townsend and Wasserman 2011). In addition, those who engaged in casual sex had initiated sexual relations at earlier ages (Grello et al. 2006) and had had more sexual partners in the

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past year (Grello et al. 2006; Townsend and Wasserman 2011).

Casual sex is common in party settings, which also cause it to be related to higher rates of risky sexual behaviors (Bersamin et al. 2012; Hittner et al. 2016). The percentages of condom use during casual relations with vaginal penetration range between 46.6 and the 81% of such contacts (Fielder and Carey 2010b; Lewis et al. 2012; Paul et al. 2000), whereas condoms are not usually used for oral sex (Fielder and Carey 2010b). Furthermore, having casual sexual relations is associated with consumption of alcohol and other drugs (Claxton and van Dulmen 2013; García et al. 2012), with rates reaching 70% of alcohol consumption before the most recent sexual relation (Grello et al. 2006; Lewis et al. 2012). Consumption of marijuana and other drugs before casual sex is less prevalent but also noteworthy (Fielder and Carey 2010b; Kuperberg and Padgett 2016). Similar patterns of risky sexual behavior have been shown to be prevalent among Spanish students' general sexual behavior (Castro and Santos-Iglesias 2016).

Sociosexuality, understood as the orientation towards sexual relations without commitment (Simpson and Gangestad 1991), is related to casual sexual behavior, as could be expected (Lewis et al. 2012; Olmstead et al. 2013). Those who have a less restrictive sociosexual orientation have had more casual sex contacts with penetration (Olmstead et al. 2013) and also more casual partners in the past year (Townsend and Wasserman 2011). It has also been observed that these attitudes play an important moderating role between casual sex and psychological well-being (Vrangalova and Ong 2014). Sociosexuality has shown variability between countries and cultures (Lippa 2009) and thus may affect differences in casual sexual behavior across countries.

The psychological correlates of casual sex remain unclear in the literature (García et al. 2012). Whereas some studies relate casual sex to low self-esteem (Paul et al. 2000), others do not find any direct relation (Vrangalova 2015; Owen et al. 2011). In contrast, Vrangalova and Ong (2014) found that, when there was a high orientation towards sociosexuality, having casual sex was related to higher self-esteem. In the case of depression, the results are inconclusive (Fielder et al. 2013; Grello et al. 2006), and the mediating role of sociosexuality is again pointed out, with less depression found among those who had casual sex if they had a high orientation towards sociosexuality (Vrangalova and Ong 2014). Nevertheless, it should be noted that most studies assess general self-esteem and depression instead of relating them to sexuality—that is, to sexual self-esteem as a sexual partner and to sexual dissatisfaction. Lastly, we note that most of the studies in this area have expected to find negative relations between casual sex and psychological well-being. However, it was found that engaging in casual sex was more closely associated with immediate positive responses rather than with negative responses (Lewis et al. 2012; Owen et al. 2011). All the

abovementioned variables have been shown to be relevant to casual sex from different theoretical perspectives (Berntson et al. 2014; Fielder and Carey 2010a; Fielder et al. 2013) or, in the case of well-being, have been largely studied (García et al. 2012; Vrangalova 2015).

The majority of studies on casual sex have been carried out in North America, so studies in other cultural contexts are needed (Farvid and Braun 2017). Cultural differences in sexual behavior are well established (Lippa 2009; Lottes and Alkula 2011) and may affect casual sex prevalence (Kaspar et al. 2016). Cultural differences may also differently shape short-term partnering patterns (Kuperberg and Padgett 2016). Despite the relevance of cultural factors for differences in casual sexual behavior, a lack of studies is observed in Spain, with only one study carried out in this country. Kaspar et al. (2016) compared casual sexual behavior among Spanish and German university students and its relation with personality traits, finding that Spaniards had more casual sex. However, they did not examine the variables commented above.

Drawing on the above, it can be said that casual sex is common in the university population of students without a partner, at least in North America, and that there is extensive literature on the possible variables associated with these relations, although some associations are unclear. The goal of this study was, on the one hand, to provide information about who engages in casual sexual relations and what they consist of. It aims to assess which sociodemographic and psychosexual variables are related to casual sex, with particular attention to psychological sexual well-being (e.g., self-esteem as a sexual partner, dissatisfaction with sexual life). On the other hand, we aim to provide information about casual sex among students from a Spanish university. Due to the scarcity of studies in Spain, the present study could have important implications. The results can be compared with those obtained in other geographical and cultural contexts. Also, examination of the characteristics of casual sex in students of Spain is relevant in order to identify casual sex patterns. As a result, social policies and sexual health promotion programs may be adapted and improved.

Method

Participants

The initial sample was made up of 2769 participants aged between 18 and 63 years ($M = 21.93$, $SD = 4.02$). Five inclusion criteria were employed:

1. Age between 18 and 26 years, in accordance with criteria from previous studies (Castro and Santos-Iglesias 2016): 811 participants were excluded.

2. Currently studying in the university: 156 participants were excluded.
3. Following criteria from previous studies (Manthos et al. 2014; Owen et al. 2010; Owen et al. 2011), we excluded participants who had a couple relationship of 12 or more months, because we asked about casual sex in the past year and did not wish to assess sexual behavior outside of the couple. Therefore, we included people who did not have a partner at the time of the study or who had been in a couple relationship for less than 12 months: 809 participants were excluded.
4. Being heterosexual, because the non-heterosexual samples were very small: 135 participants were excluded.
5. Having replied to the question about casual sex in the past year: 199 participants were excluded.

The final sample comprised of 659 heterosexual university students (68% women, 32% men), aged between 18 and 26 ($M = 20.84$, $SD = 2.07$), with a mean religiosity of 3.11 (in a scale ranging from 1 = *none* to 10 = *extremely*), without a partner (74.7%) or being in a relationship for less than 12 months (25.3%). As we did not ask about participants' nationality, we cannot inform about the distribution of this variable. In the university and in the selected age range, 94% of the students are Spaniards.

Instruments

Sociodemographic and Sexual Behavior Questionnaire

We used a questionnaire based on previous studies (Castro and Santos-Iglesias 2016). We asked about gender (male/female), age, level of religiosity, sexual orientation, and whether or not they had a partner (and if so, duration, in months, of the relationship). We also asked about lifetime sexual behavior (whether they had had sexual relations with vaginal penetration, age at the first vaginal sexual intercourse, number of partners), in the 3 months prior to the completion of the questionnaire (if they had had relations with vaginal penetration, number of partners, number of relations, number of relations with condoms, and number of relations under the influence of alcohol and drugs), and about masturbation (whether they masturbated and frequency: 1 = *never*, 2 = *one to three times a month*, 3 = *once a week*, 4 = *two to four times a week*, 5 = *five to six times a week*, and 6 = *seven or more times a week*).

Sexual Relations during the Past 12 months This variable was evaluated with three questions, based on the temporal criteria of previous studies (Owen et al. 2010). The first question, with a dichotomic response (yes/no) asked whether they had engaged in this type of relations (“*In the past year, did you ever have a sexual relation with a partner without any affective commitment?*”). Those who responded affirmatively then

answered two multiple-response questions. The first question asked about the types of behavior involved in that relationship (masturbation, oral sex, vaginal sex, anal sex), and the second one asked about the type/s of partner/s of those contacts (a partner you just met, an acquaintance with whom there was no romantic relationship, a friend with whom there was no romantic relationship).

HIV-Attitudes Scale (Espada et al. 2013) The scale consists of 12 items distributed in four subscales. In this study, two of the subscales were used. The first was the scale of attitudes towards safe sex when there are obstacles (e.g., “If I were going to have sex and realized that I have no condoms, I would wait until I have them to maintain sexual intercourse”), made up of three items, and the second one is of attitudes towards condom use (e.g., “I would be willing to use condoms in a sexual relationship”), with four items. The participants responded on a Likert-type scale ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Values of internal consistency of 0.81 and 0.80, respectively, were obtained in this study.

Sociosexual Orientation Inventory-Revised (Penke and Asendorpf 2008)

We used the Spanish validation of Barrada et al. (2016). This instrument has nine items that assess sociosexual orientation on the basis of three factors: *behavioral* (e.g., “With how many different partners have you had sexual intercourse on one and only one occasion?”), *attitudinal* (e.g., “Sex without love is OK.”), and *desire* (e.g., “How often do you have fantasies about having sex with someone with whom you do not have a committed romantic relationship?”). These items are rated on a nine-point scale, ranging from 0 to 20 or *more* in the behavioral factor; from *strongly disagree* to *strongly agree* in the Attitudinal factor; and from *never* to *at least once a day* in the desire factor. Due to an error in the transcription of the questionnaire, the items corresponding to the attitudinal factor were rated on a seven-point scale, with the same tags as the original scale. Cronbach's alphas of 0.85 for the behavioral factor, 0.79 for the attitudinal factor, and 0.82 for the desire factor were obtained in this study.

Sexuality Scale (Snell and Papini 1989)

We used the Spanish adaptation of Soler et al. (2016). This instrument has 15 items that assess perceptions of one's own sexuality through three components: Self-esteem as a sexual partner (e.g., “I am a good sexual partner”), dissatisfaction with sexual life (e.g., “I'm depressed about the sexual aspects of my life”), and sexual preoccupation (e.g., “I'm constantly thinking about having sex”). It is rated on a five-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. In this study, we obtained Cronbach's alpha of 0.88 for self-esteem as a sexual partner, 0.88 for dissatisfaction with sexual life, and 0.87 for sexual preoccupation.

Procedure

The present study formed part of a more comprehensive project carried out in a medium-size Spanish university, the goal of which was to determine different components of the sexual attitudes, beliefs, and behaviors of students in Spanish universities. The data were collected between March and April of 2016. We approached the participants through the e-mail distribution lists of the university. Each student registered on the lists whose administrators gave access to the corresponding information received an e-mail with the goal of the study, contact information of the principal investigator, participation conditions, and a link to access the survey. Only those who accepted the informed consent could gain access. The response rate was 11.5%. After completing the survey, the participants stated whether they wanted to participate in the draw of an iPad Mini™. Those who responded affirmatively provided their name and e-mail, data that were stored in a secure database separately from the responses to prevent identifying the participants. This study was approved by the ethics research committee of the region.

Data Analysis

Firstly, three indexes were generated to assess risky sexual behavior, ranging from 0 to 1, which indicated ratios of condom use, consumption of alcohol, and consumption of drugs in sexual relations. To calculate them, we divided the number of relations with condom/under the influence of alcohol/under the influence of drugs by the total number of relations in the previous 3 months. Higher scores in the condom use index indicated a greater proportion of relations with condoms. Higher values in the rates of consumption of alcohol and other drugs indicated a greater proportion of relations under the influence of these substances.

Subsequently, the type of behavior/s and partner/s with whom the participants had had casual sex was described and the differences between genders were analyzed with Pearson's correlations with dummy coded variables. Lastly, to examine the relation between engaging or not engaging in casual sex, gender, and its possible interaction with the variables of the study, two-factor analyses of variance were conducted: engagement in casual sex \times gender. Partial eta squared (η_p^2) was used as indicator of effect size and interpreted with Cohen's (1988) guidelines, that is, values of 0.01 represent small effects, 0.06 are medium effects, and 0.14 or more are considered large effects. When they failed to reach a medium effect size, the effects of casual sex and gender were analyzed separately. For this purpose, *t* tests were carried out, using Cohen's *d* as estimation of the effect size, taking 0.20 as indicator of small size, 0.50 as medium size, and 0.80 as large size (Cohen 1988). In order to avoid a large increment

of Type I error rate due to the large number of comparisons, we adjusted the *p* values with Holm's (1979) correction. We defined four comparison blocks where the correction was applied: (a) type of behavior by gender, (b) type of partner by gender, (c) sociodemographic and psychosexual variables by gender, and (d) sociodemographic and psychosexual variables by engagement in casual sex. We will refer to these adjusted *p* values as *p*_{adj}. We used R3.3.2 (R Core Team 2016) for all data analysis.

Results

Description of Casual Sex

In the past year, 47.2% of the participants (*n* = 311) had had some casual sexual contact, with no statistically significant differences between men (49.3%) and women (46.2%) (*r* = 0.03, *p* = .460). In 56.3% of those contacts, masturbation took place; in 64.3%, oral sex; in 92.9%, vaginal sex; and in 5.1%, anal sex. There were no statistically significant differences in sexual activity as a function of gender (all *p*_{adj}s = 1). For the most part, these contacts were with an acquaintance (55.3%), followed by a friend (46.3%), with fewer contacts with a partner whom they had just met (35%). With regard to the type of partner, there were no statistically significant differences as a function of gender (all *p*_{adj}s \geq .417). All the associations between variables were rather small, with unsigned *r* values in the range of [0.02, 0.08]. For a summary of the results, see Table 1.

Sociodemographic and Psychosexual Differences by Gender

All partial eta squared for the gender \times engagement in casual sex interactions indicated small effect sizes, all $\eta_p^2 \leq .015$. Given this lack of relevant interactions, we analyzed the main effects. We examined the gender differences in the variables of interest (see Table 2).

Masturbation was more frequent in men, with a large effect size, $t(630) = 17.75$, *p*_{adj} < .001, *d* = 1.51. Men expressed worse attitudes towards condom use when there are obstacles, with a medium effect size, $t(506) = -6.88$, *p*_{adj} < .001, *d* = -0.65. Favorable attitudes towards sociosexuality were moderately higher in men, $t(647) = 4.78$, *p*_{adj} < .001, *d* = 0.40. The mean score in desire for relations without commitment was higher in men, with a medium-high effect size, $t(635) = 8.98$, *p*_{adj} < .001, *d* = 0.77. Lastly, men showed moderately higher sexual preoccupation, $t(597) = 6.84$, *p*_{adj} < .001, *d* = 0.60. For the other variables, no statistically significant differences were found, all *p*_{adj}s \geq .061, and all the unsigned effect sizes were ≤ 0.24 .

Table 1 Percentage of participants who engaged in casual sex by type of behavior and partner and differences by gender

	Total (%)	Women (%)	Men (%)	r^a	p_{adj}^a
Type of behavior					
Masturbation	56.3	54.1	60.6	0.06	1
Oral sex	64.3	62.3	68.3	0.06	1
Vaginal sex	92.9	92.3	94.2	0.04	1
Anal sex	5.1	4.8	5.8	0.02	1
Type of partner					
Stranger	35.0	33.3	38.5	0.05	.417
Acquaintance	55.3	52.7	60.6	0.08	.417
Friend	46.3	49.3	40.4	−0.08	.417

Only those participants who reported having casual sex among the 12 months before the study answered these items, $n = 311$. The percentages indicate, among those participants who engaged in casual sex, the proportion of people who had engaged in each type of casual sexual behavior and with each type of partner. The sum of percentages does not necessarily correspond to 100%, as the same person may have engaged in different casual behaviors with different types of partner. *Gender* was coded with a dummy variable, where 0 = *women* and 1 = *men*; the *Type* variables were coded as 0 = *no* and 1 = *yes*

^a Statistics r and p_{adj} correspond to the comparison between men and women for types of behavior and partner, p values adjusted for multiple comparisons with Holm (1979) correction

Sociodemographic and Psychosexual Differences by Engagement in Casual Sex

Next, we examined the differences in the proposed sociodemographic and psychosexual variables as a function of engagement in casual sex. Among the sociodemographic variables, people who engaged in casual sex were a little older ($t(657) = 4.76$, $p_{adj} < .001$, $d = 0.37$) and slightly less religious ($t(656) = -3.38$, $p_{adj} = .006$, $d = -0.26$).

Sexual Behavior and Risk Behaviors We examined the differences in past sexual behavior and during the last 3 months. Among those who had engaged in casual sex, we observed a slightly earlier initiation of relations with penetration ($t(541) = -4.71$, $p_{adj} < .001$, $d = -0.41$) and a greater number of partners, both lifetime ($t(645) = 13.67$, $p_{adj} < .001$, $d = 1.08$) and in the previous 3 months, ($t(639) = 12.11$, $p_{adj} < .001$, $d = 0.96$), with a large effect size in both cases. People who had engaged in casual sex reported a slightly higher percentage of relations under the influence of alcohol ($t(360) = 2.99$, $p_{adj} = .018$, $d = 0.33$), and also after consuming other substances, ($t(364) = 2.78$, $p_{adj} = .023$, $d = 0.30$). There were no statistically significant differences for condom use in the past 3 months ($t(358) = -0.68$, $p_{adj} = .998$, $d = -0.08$) or for masturbatory frequency ($t(630) = 1.34$, $p_{adj} = .543$, $d = 0.11$).

Attitudes towards the Condom and Sociosexuality There were no statistically significant differences between people

who had engaged in casual sex and those who had not in attitudes towards the condom in general ($t(520) = 0.59$, $p_{adj} = .998$, $d = 0.05$), but there were significant differences in attitudes towards its use if there were obstacles, slightly more negative in those who had had casual sex ($t(506) = -4.88$, $p_{adj} < .001$, $d = -0.43$). In sociosexuality, we observed higher scores among those who had had casual sex in the behavioral ($t(624) = 20.67$, $p_{adj} < .001$, $d = 1.66$) and attitudinal factors ($t(647) = 11.70$, $p_{adj} < .001$, $d = 0.92$), with a large effect size. We also found this tendency in the desire factor, with a medium effect size ($t(635) = 6.86$, $p_{adj} < .001$, $d = 0.55$).

Self-Esteem as a Sexual Partner, Sexual Dissatisfaction, and Sexual Preoccupation Those who had engaged in casual sex the past year showed higher self-esteem as a sexual partner, with a small effect size ($t(552) = 4.02$, $p_{adj} < .001$, $d = 0.34$). Moreover, they were less dissatisfied with their sexual life ($t(562) = -2.93$, $p_{adj} = .018$, $d = -0.25$) and more preoccupied with sex ($t(597) = 3.34$, $p_{adj} = .006$, $d = 0.27$), with somewhat lower effect sizes.

Discussion

Casual sex is a common practice in North American university campuses (Claxton and van Dulmen 2013; García et al. 2012). The cultural factor may play an important explanatory role in the way people express their sexuality and, therefore, in the results of studies as a function of the geographical context in which they are conducted. The goal of this study was to examine the characteristics of casual sex in students from a Spanish university and to determine who engages in it, as well as to examine the extent to which certain sociodemographic and psychosexual variables are related to it. This study has revealed that casual sex is also a common practice among students from a Spanish university, and that it is also related to a diverse series of variables.

With regard to the prevalence of this type of relations, as in earlier studies, it was found that about 50% of young university students without a partner or who had not had a partner at some point in the past year had engaged in casual sex the previous year (Owen et al. 2010). In most of those contacts, there was vaginal penetration, which contradicts some previous studies (see Fielder and Carey 2010b; Paul et al. 2000; Wesche et al. 2017) and raises the need to clarify what is meant by sexual contact (e.g., kissing, masturbating) and what is not. In addition, it was more common to have casual sex with acquaintances than with friends, although other studies found the opposite (Grello et al. 2006; Lewis et al. 2012).

The role of gender must be taken into account because it is essential when assessing sexuality. In this study, no statistically significant differences were found either with regard to the amount of men and women's casual sex or to the type of

Table 2 Differences in sociodemographic and psychosexual variables by gender and engagement in casual sex

	<i>n</i>	Gender						Engagement in casual sex					
		Mean ^a	Women		Men		<i>d</i>	Mean ^b	No		Yes		<i>d</i>
			Mean	SD	Mean	SD			Mean	SD	Mean	SD	
Age	659	.32	20.69	2.03	21.17	2.11	0.24	.47	20.49	1.99	21.24	2.09	0.37
Religiosity	658	.32	3.09	2.32	3.17	2.46	0.04	.47	3.41	2.50	2.79	2.15	−0.26
Age of first sexual intercourse ^c	543	.34	16.89	1.63	17.26	1.87	0.21	.56	17.40	1.70	16.71	1.68	−0.41
Lifetime sexual partners	647	.32	4.37	5.79	4.79	5.81	0.07	.48	1.88	2.56	7.38	6.88	1.08
Masturbatory frequency	632	.32	2.32	1.22	4.16	1.20	1.51	.47	2.84	1.53	3.00	1.43	0.11
Sexual partners (3 months)	641	.32	0.81	0.90	0.76	0.91	−0.06	.48	0.42	0.57	1.20	1.01	0.96
Ratio condom use (3 months) ^d	360	.32	0.71	0.39	0.66	0.43	−0.14	.65	0.71	0.40	0.68	0.41	−0.07
Ratio alcohol use (3 months) ^d	362	.31	0.26	0.34	0.24	0.34	−0.06	.65	0.18	0.30	0.29	0.35	0.33
Ratio drug use (3 months) ^d	366	.31	0.07	0.22	0.07	0.23	−0.01	.65	0.03	0.14	0.10	0.26	0.30
HIV-AS attitudes when obstacles	508	.32	10.35	2.01	8.97	2.34	−0.65	.48	10.36	2.07	9.42	2.27	−0.43
HIV-AS attitudes condom use	522	.33	15.34	1.58	15.21	1.52	−0.08	.50	15.26	1.75	15.34	1.35	0.05
SOI-R behavior	626	.31	7.27	4.36	7.70	4.49	0.10	.47	4.74	2.21	10.36	4.35	1.66
SOI-R attitudes	649	.32	13.54	5.06	15.52	4.63	0.40	.48	12.18	4.84	16.37	4.21	0.92
SOI-R desire	637	.32	10.67	5.43	14.88	5.67	0.77	.47	10.55	5.47	13.62	5.83	0.54
SS self-esteem as sexual partner	554	.33	19.22	4.11	19.80	3.81	0.14	.52	18.72	4.24	20.07	3.69	0.34
SS sexual dissatisfaction	564	.33	9.91	4.88	10.48	4.98	0.12	.51	10.71	5.29	9.50	4.46	−0.25
SS sexual preoccupation	599	.32	9.33	4.17	12.04	5.17	0.60	.49	9.58	4.51	10.85	4.78	0.27

The values in bold indicate the relations that were statistically significant, $p \leq 0.05$, with p values adjusted for multiple comparisons with Holm (1979) correction

HIV-AS HIV Attitudes Scale, SS Sexuality Scale, SOI-R Sociosexual Orientation Inventory Revised

^a Proportion of men

^b Proportion of people who engaged in casual sex

^c Maximum possible responses = 545 (number of participants who had debuted in vaginal sex)

^d Maximum possible responses = 375 (number of participants who had vaginal sex in the 3 months before the study)

behaviors carried out. In addition, gender only interacted with having or not having casual sex for one of the variables of interest (condom use), although with a very small effect size. A recent meta-analysis concluded that gender differences in sexuality have been decreasing in recent decades (Petersen and Hyde 2010), which may explain these results. It was found that women scored lower in sociosexual attitudes and desire, but these differences were not reflected in their amount of casual sexual behavior (Penke and Asendorpf 2008). In view of this, sociobiological explanations have been offered and differences as a function of the culture and gender equality in each country have been discussed (Lippa 2009). It is understood that in a competitive market with similar ratios of men and women, and because there are more men than women who desire casual sex, the real number of partners between genders should be equal.

This study has contributed relevant information about the variables related to casual sex. With regard to the sociodemographic variables, we found a small association with religiosity, related to conservative ideologies towards

premarital sex (Claxton and van Dulmen 2013; Owen et al. 2010) and to norms discouraging casual sex (Kuperberg and Padgett 2016). The relation with age is unclear. Previous studies highlight an increase of casual sex around age 21 (Lyons et al., 2015), which would coincide with our results. Others propose that the greater the age, the fewer the casual relations, because increased age tends to be associated with stable relationships (Roberson et al. 2015). The relation between age and frequency of casual sex may be curvilinear and, therefore, the sign of correlation would depend on the age range analyzed.

Associations between engaging in casual sex and some risky sexual behaviors emerged. In the line of previous studies (Grello et al. 2006; Townsend and Wasserman 2011), we found earlier sexual initiation and a marked difference in the lifetime number of partners and of partners in the previous 3 months among those who engaged in casual sex. This could be a reflection of their way of relating in sexuality, maintained over time and allowing more sexual partners due to casual sex characteristics. There were no statistically significant differences in condom use among those who had casual sex and

those who did not. In fact, there were no differences in general attitudes towards the condom, although, when there are obstacles, the attitude was slightly more negative in students who had casual sex. Sensation-seeking may influence this more negative attitude.

Having casual sex is related to greater sensation-seeking and impulsivity (Fielder et al. 2013), and these people may have a greater urgency for casual contact without being concerned about the consequences if there are obstacles towards condom use at that moment. Differences in alcohol consumption in sexual relations were found, despite the fact that they were not very large. The prevalence of consumption was much lower than that of other studies (30% in our case vs. almost 70%). This could be explained by the cultural differences between the USA and Europe (Claxton et al. 2015). Alcohol consumption has a disinhibitory function (Bermton et al. 2014; Owen et al. 2011; Paul et al. 2000), and its use could be associated with negative psychological responses (Bachtel 2013). Lower consumption may indicate that there is less need for disinhibition, perhaps associated with the extension of casual sex as a socially accepted practice.

The largest effect sizes were found for the relation between prior casual sexual behavior, according to the Sociosexual Orientation Inventory-Revised (SOI-R) (Penke and Asendorpf 2008), and the number of sexual partners. Both variables were related to engaging in casual sex in the past year, indicating a tendency of stable behavior (Townsend and Wasserman 2011). The relation between sociosexuality and casual sex was expected, and it indicates that those who have engaged in more casual sex have a better attitude towards it and have a larger number of casual partners (Owen et al. 2010). In addition, according to previous studies, when a person has high sociosexuality and engages in casual sex, the measures of well-being (e.g., self-esteem, satisfaction) are higher, due to attitude-action coherence (Vrangalova and Ong 2014).

A relevant contribution of the study is the assessment of measures of well-being related to sexual life. Thus, those who had engaged in casual sex showed greater self-esteem as a sexual partner and more positive attitudes towards sociosexuality. In prior literature, casual sex has been related to general self-esteem and depression, with contradictory results (see Claxton and van Dulmen 2013; García et al. 2012), perhaps because it did not focus on measures of well-being related to sexuality. Those who have casual sex are more preoccupied with sex, which in turn is an important motivation for casual encounters (Fielder and Carey 2010b).

This study presents a series of limitations, especially with regard to the participants, which hinder the generalization of the results. First, our sample is not representative of the population of university students. We had a predominantly female sample, completely heterosexual, and limited to those who agreed to participate. Second, as the sample derived from a

single university, we do not know how generalizable our results are to the overall population of university students from Spain. Although we acknowledge these limitations, we consider that they are common problems in sexuality research based on convenience sampling. Third, we are limited to university students. Other sectors of the youth population who could provide much information about casual sex were left out (Letcher and Carmona 2015). Fourth, we made a mistake when applying the attitudinal dimension of the SOI-R, as the response scale had seven points instead of nine. This seems to be a minor problem, as, to a very large degree, our results follow those found with the Spanish adaptation of the SOI-R (Barrada et al. 2016). Fifth, our study shares with other studies based on self-selected samples and self-report measures the fact that the results may be limited by response and recall bias. For future research in Spain, we recommend including behaviors such as kissing, as well as a temporal criterion (e.g., a single time, repeatedly), to differentiate between the various types of casual relations (Claxton and van Dulmen 2013).

In spite of these limitations, we consider that the work makes important contributions. Firstly, it addresses casual sex in students from a Spanish university, filling the existent gap in casual sex literature for this country. This allows comparison with the data obtained in other geographical contexts and the analysis of the role of culture in the way young people express their sexuality. Secondly, it provides information about the sociodemographic and psychosexual variables related to casual sex and introduces the relevance of assessing self-esteem as a sexual partner and dissatisfaction within the sexual setting, instead of in general.

Important practical implications for social policy and sex education are derived from these findings. It allows adapting social policies and sexual health interventions to the reality of casual sex in the country's youth. Sex education programs should include strategies for young people to live a healthy sexuality, in its variety of patterns and possible interactions (Wesche et al. 2017), including casual sex. As casual sex has been related to risky sexual behavior, especially in party settings (Hittner et al. 2016; Bersamin et al. 2012), better sex education would allow young people to improve their protection choices (Wesche et al. 2017). This education should start in high school, as casual sexual behavior may start during adolescence (García et al. 2012; Lyons et al. 2015). Adapted programs should be implemented in university campuses, due to high prevalence of casual sex. Finally, these programs should also be available in public services for all emerging adults, as casual sex is not exclusive of university students.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in this study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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