

Analysis of Coital and Non-Coital Sexual Behavior in Adolescents: Spain, 2016

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Abstract

The adolescent population is considered a group that is at risk for Sexually Transmitted Infections (STIs) or HIV. The objective of this study was to analyze the characteristics of the sexual behavior (both coital and non-coital) of Spanish adolescents and the differences on the basis of gender. It was a representative sample of 2,703 Spanish adolescents of between 14 and 20 years old. In total, 49.9% of participants were males ($M = 15.95$; $SD = 1.30$) and 51.1% females ($M = 15.83$; $SD = 1.28$). The results show that 27% of adolescents maintain penetrative sexual relations, 45.7% engage in non-penetrative sex and 27.3% have never had sexual experience. On the basis of gender, males initiate non-penetrative sexual behavior, vaginal sex and anal sex earlier than females, have a greater number of non-penetrative sexual encounters under the influence of alcohol and have a greater number of anal and vaginal sex partners. Females, on the other hand, tend to have partners who are older than them. No gender differences were found in the case of condom use in the first and last sexual contact with anal and vaginal penetration, or in the consistent use of condoms in anal and vaginal sexual encounters, of which it is particularly worth noting that 47.2% of adolescents use condoms inconsistently in vaginal sexual relations, and 81.9% in anal relations. It can be concluded that it is necessary to intervene and educate adolescents on the prevention of STIs/HIV at an early age, taking into account a gender perspective.

Keywords: adolescence, sexual behavior, sexuality, HIV, sexually transmitted infections

Introduction

Adolescence is considered a crucial period in human development which is characterized by numerous biological, psychological and social transformations. This stage of development is identified with experimentation, exploration and risk taking by adolescents such as drug use and abuse and sexual risk behavior (Lara & Abdo, 2016; UNICEF, 2012; World Health Organization [WHO], 2014). Therefore, due to the rapid and significant changes that take place during adolescence, it is an important moment in the life of individuals in order to lay the foundations for good health in adulthood (WHO, 2014).

Such changes are particularly notorious in the sexual evolution of adolescents, influenced by factors such as pubertal development, acceptance of one's body image, the discovery of sexual needs and learning about sexual relations (García-Vega, Menéndez, Fernández, & Cuesta, 2012; Hensel & Fortenberry, 2013; Widman, Choukas-Bradley, Helms, & Prinstein, 2016). Adolescents start to experience their first sexual encounters (Lefkowitz, Vasilenko, & Leavitt, 2016; Zito & De Coster, 2016), leading to this population being considered at risk for HIV infection and Sexually Transmitted Infections (STIs), along with unwanted pregnancies (Hendrick, Cance, & Maslowsky, 2016; Salam et al., 2016; Teva, Bermúdez, Ramiro, & Ramiro-Sánchez, 2013).

According to the World Health Organization (WHO, 2016), over one million people contract an STI each day. Chlamydia is the most frequent STI in Europe, with a rate of 199 cases for every 100,000 European inhabitants, of which two thirds (68%) take place between the ages of 15 and 24 (European Centre for Disease Prevention and Control [ECDC], 2016). Globally, around 5,700 new HIV infections occur on a daily basis, of which nearly 2,000 new infections correspond to young people aged between 15 and 24 (UNAIDS, 2016). In Spain, the rate of new HIV infections diagnosed is higher than the European Union average. Of the total number of new cases of HIV diagnosed in Spain in 2015, 55.8% occurred in young

people aged between 15 and 34, and sexual contact represents the main mode of transmission (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2016).

Numerous studies have shown that engaging in sexual relations at a young age is a risk behavior for STIs/HIV and unwanted pregnancies (Fernandes de Araújo, Teva, & Bermúdez, 2014; Kastbom, Sydsjö, Bladh, Priebe, & Svedin, 2015; Lansford et al., 2010; Lara & Abdo, 2016). In recent decades, there has been a decrease in the age of sexual initiation, both for males and females (Liu et al., 2015). In Spain, the mean age of vaginal sex initiation is around 15 years old (Espada, Morales, & Orgilés, 2014; García-Vega et al., 2012; Teva, Bermúdez, & Buela-Casal, 2009a; Teva et al., 2013). With regards to anal sex, the mean age of initiation is around 15.5 years old (Teva et al., 2013).

Besides starting sexual relations at an early age, other risk behaviors for STIs/HIV have been found, such as a greater frequency of sexual relations, the inconsistent use of condoms, having multiple sex partners (Nehl, Elifson, DePadilla, & Sterk, 2016; Spitalnick et al., 2007; Teva et al., 2009a), having older sex partners (Beauclair, Helleringer, Hens, & Delva, 2016; Chapman et al., 2010) or the use of alcohol and other drugs (Castro & Santos-Iglesias, 2016; Espada, Morales, Orgilés, Piqueras, & Carballo, 2013; Thephtien, Altaf, Chuchareon, & Srivanichakron, 2016), among others.

One of the most important aspects to take into account in the prevention of STIs/HIV in adolescents is the gender differences in sexual behavior. In this respect, some studies show that males display a greater frequency in the number of sexual relations and have a greater number of sex partners (Liu et al., 2015; Teva et al., 2013). With regards to condom use, some studies indicate a higher level of use among males than among females (Black, Sun, Rohrbach, & Sussman, 2011; Teva et al., 2013). Likewise, females show a more stable trend of having older partners compared to men, which has been associated with a greater probability of contracting STIs/HIV (Beauclair et al., 2016; Chapman et al., 2010; Hallet et

al., 2007). These differences between males and females in sexual behavior may be due to the existence of gender roles and stereotypes (De Meyer et al., 2014; Grose, Grabe, & Kohfeldt, 2014). Therefore, interventions aimed at reducing or preventing the sexual risk of STIs/HIV must take into account the gender differences in the sexual behavior of adolescents (Teitelman et al., 2016).

Considering the importance of the availability of updated data regarding the variation in sexual risk behavior within short periods of time, in the past decade several studies have been carried out on a regular basis to analyze sexual behavior based on representative samples of Spanish adolescents (Bermúdez, Castro, Madrid, & Buela-Casal, 2010; Teva, Bermúdez, & Buela-Casal, 2009b; Teva et al., 2009a; Teva et al., 2013). For this reason, the objective of this study was to analyze the characteristics of sexual behavior based on a representative sample of Spanish adolescents and the differences on the basis of gender, in order to obtain updated and useful information to make it possible to draw conclusions on the possible changes in the sexual behavior of adolescents and the effectiveness of sex education programs and strategies to prevent STIs/HIV that are being undertaken within this population. Therefore, the challenge associated to this study is to obtain a current description of the sexual behavior of Spanish adolescents, making it possible to design preventive sex education strategies taking gender into account, and enabling the reduction of sexual risk behaviors from an early age, thus preventing the occurrence of STIs that have been found in recent studies among samples of young Spanish university students (Coronado, Delgado-Miguel, Rey-Cañas, & Herráiz, 2017).

Method

Participants

It was a representative sample of 2,703 Spanish adolescents from 18 public secondary schools and 17 private schools from the 17 Spanish autonomous communities, with an age

range of 14 to 20 years old. In total, 49.9% of participants were males ($M = 15.95$; $SD = 1.30$) and 51.1% females ($M = 15.83$; $SD = 1.28$). Table 1 demonstrates the sociodemographic characteristics of the sample.

Table 1. *Descriptive Socio-Demographic Data in the Total Sample and According to Gender*

	Total ($N = 2,703$)		Males ($n = 1,350$)		Females ($n = 1,353$)		
	Frequency	%	Frequency	%	Frequency	%	
Age							
<i>M</i>	15.89		15.95		15.83		
<i>SD</i>	1.29		1.30		1.28		
<i>N</i>	2,703	100	1,350	49.90	1,353	50.10	
Age (years)							
14	413	15.30	196	14.50	217	16.00	
15	746	27.60	353	26.10	393	29.00	
16	653	24.20	331	24.50	322	23.80	
17	555	20.50	296	21.90	259	19.10	
≥ 18	336	12.40	174	12.90	162	12.00	
Type of School							
Public	1,583	58.60	812	60.10	771	57.00	
Private	1,120	41.40	538	39.90	582	43.90	
Religion							
Catholic	1,509	55.80	688	51.00	821	60.70	
Other religion	136	5.00	63	4.70	73	5.40	
Non-believer	1,058	39.10	599	44.40	459	33.90	
Sexual orientation							
Heterosexual	2,526	93.50	1,285	95.20	1,241	91.70	
Homosexual	29	1.10	22	1.60	7	.50	
Bisexual	67	2.50	17	1.30	50	3.70	
Not defined	81	3.00	26	1.90	55	4.10	
In a relationship							
Never	900	33.00	439	32.50	461	34.10	
In the past	1,121	41.50	604	44.70	517	38.20	
At present	682	25.20	307	22.70	375	27.70	
Sexual experience							
Never	738	27.30	357	26.40	381	28.20	
Penetrative	731	27.00	365	27.00	366	27.10	
Non-penetrative	1,234	45.70	628	46.50	606	44.80	

Instruments

Sociodemographic data and sexual behavior. The questionnaire on socio-demographic data and sexual behavior developed by Teva et al. (2009a) was applied. With regards to socio-demographic data, it included questions on gender, age, type of school (public or private) and religion (catholic, other religion or non-believer). In terms of sexual relations, there were questions on sexual orientation (heterosexual, homosexual, bisexual or not defined), relationship experience (never had a partner, has had a partner in the past or has a partner at present), and sexual experience (never had sexual experience, has had non-penetrative sexual experience such as kissing, fondling or touching, or has had penetrative sexual experience). Adolescents who have had non-penetrative sexual contact answered questions such as the age of their first non-penetrative contact; the number of partners in the past two months; the type of partner (stable or occasional); the age of the partners with whom they have had non-penetrative contact; the type of non-penetrative contact that they have experienced (kissing, fondling, masturbation and oral sex); and the use of alcohol or drugs in their last non-penetrative sexual contact. Adolescents who have had penetrative sexual contact answered questions such as the age of the partners with whom they have had penetrative contact; condom use in their last penetrative sexual contact; the type of contraceptives used in their last sexual contact; and the frequency of their drug or alcohol use in penetrative sexual relations in the past two months. There were then separate questions on vaginal and anal sex. In both cases, the adolescents were asked if they had ever had vaginal and anal sex; the age of their first sexual contact; condom use in their first contact; the number of sexual partners in their lifetime. With regards to the past two months they were asked about the number of times they have had penetrative sexual contact; the number of different partners with whom they

have had penetrative sexual contact and the number of times they used a condom. Based on these data referring to the past two months, the vaginal and anal sexual risk index was obtained in accordance with the guidelines of Bermúdez et al. (2010).

Design

It was a cross-sectional descriptive population study conducted using a probabilistic sample survey.

Procedure

Firstly, a stratified random sampling was carried out, taking into account the 17 autonomous communities that form Spain and the type of school (public and private). Sample size was established with a 97% confidence level and a 3% estimation error. The schools were selected randomly from the national register of non-university teaching centers (Ministerio de Educación, Cultura y Deporte, 2016). Specifically, one public school and one private school was selected from each of the 17 Spanish autonomous communities, except in the autonomous community of Andalusia where two public schools were selected due to the high number of adolescents attending school there, and with the aim of ensuring the representativeness of the sample in said autonomous community. The schools selected were then contacted by email and telephone in order to request their collaboration. If a school declined to participate, we selected another school at random. The rejection rate of the schools was 40.6%. In total, information was collected at 35 different schools. Adolescents completed the questionnaires during school hours. They all received the same instructions and they were informed that their participation was voluntary and that their responses were confidential and anonymous. The adolescents' informed consent was obtained from the directors of the schools prior to the assessment. The study was approved by the Ethics Committee of the university of origin of the authors.

Data Analysis

For the statistical analysis, the continuous variables were expressed as means and standard deviations and associations with gender variable (male/female) were analyzed with *t* Student tests. Discrete variables were expressed as frequencies and percentages, and associations with gender variable (male/female) were analyzed with chi-squared tests. Cohen's *d* was used as a measure of the magnitude of differences (Cohen, 1988) except in the cases in which one of the discrete variables had more than two categories, in which case Cramer's *V* was calculated, the values of which range from 0 (without association) to 1 (perfect association) (Field, 2009). Cohen (1988) established a conventional interpretation of effect sizes, in which $d = .20$ and Cramer's $V = .10$ are considered a small effect, $d = .50$ and Cramer's $V = .30$ are a medium-sized effect, and $d = .80$ and Cramer's $V = .50$ are a large effect. These guidelines were used throughout this article in interpreting results. Data were analyzed with SPSS version 22 and R 3.4.2 (R Core Team, 2017) was used to calculate Cohen's *d*.

Results

Type of Sexual Contact

With regards to the type of sexual experience (never, penetrative and non-penetrative), no statistically significant differences were observed between males and females ($\chi^2_{(2)} = 1.711$; $p = .557$) with a small effect size ($V = .02$). Table 1 shows the male and female percentages in accordance with the type of sexual experience.

Non-Coital Sexual Behavior

Table 2 shows the characteristics of the sexual behavior of the group of adolescents who had only had non-penetrative sexual contact, on the basis of gender. The results revealed that there are statistically significant differences in the age of the first non-penetrative sexual encounter on the basis of gender with a small effect size ($t(1232) = -4.405$; $p < .001$; $d = -.25$; 95% CI = [-.36, -.14]). The males reported that they have non-penetrative sexual contact at a

younger age than the females. In terms of the number of partners in the past two months, no statistically significant differences were found between males and females ($t(1232) = 1.592$; $p = .112$) with a small effect size ($d = .09$; 95% CI = $[-.02, .20]$). In relation to the types of non-penetrative sexual contact reported by the adolescents, no statistically significant differences were found between males and females in the frequency of kissing ($\chi^2_{(1)} = .903$; $p = .342$; $d = .05$; 95% CI = $[-.06, .17]$), fondling ($\chi^2_{(1)} = .545$; $p = .460$; $d = .04$; 95% CI = $[-.07, .15]$) and masturbation ($\chi^2_{(1)} = 2.024$; $p = .155$; $d = .08$; 95% CI = $[-.03, .19]$) with a small effect size. By comparison, there were statistically significant differences in the frequency of oral sexual contact on the basis of gender ($\chi^2_{(1)} = 5.536$; $p = .019$) with a small effect size ($d = .13$; 95% CI = $[-.02, .25]$). With regards to the type of partner (stable or occasional), statistically significant differences were found between males and females with a small effect size ($\chi^2_{(1)} = 9.635$; $p = .002$; $d = .18$; 95% CI = $[-.07, .29]$). A higher percentage of females compared to males reported having had non-penetrative sexual contact with older partners, while a higher percentage of males compared to females reported having partners of a similar age, resulting in statistically significant differences ($\chi^2_{(4)} = 210.461$; $p < .001$; $V = .41$) with a medium effect size. Furthermore, the males reported a greater use of drugs or alcohol in their last non-penetrative sexual encounter compared to the females ($\chi^2_{(1)} = 6.933$; $p = .008$; $d = .15$; 95% CI = $[-.04, .26]$) with a small effect size.

Table 2. Characteristics of Non-Penetrative Sexual Behavior in Adolescents who have Only had Non-Penetrative Sexual Experience, Differences According to Gender

	Males (n = 628)		Females (n = 606)		p	V	d	95% CI	Total (N = 1,234)	
	n (%)	M (SD)	n (%)	M (SD)					n (%)	M (SD)
Initiation age	628 (100)	13.39 (2.02)	606 (100)	13.83 (1.43)	<.001		-.25	[-.36, -.14]	1,234 (100)	13.60 (1.77)
No. of partners (past two months)	628 (100)	.91 (1.57)	606 (100)	.79 (1.00)	.112		.09	[-.02, .20]	1,234 (100)	.86 (1.33)
^a Type of contact										
Kissing										
Yes	622 (99.0)		603 (99.5)		.342		.05	[-.06, .17]	1,225 (99.3)	
No	6 (1.0)		3 (.5)						9 (.7)	
Masturbation										
Yes	179 (28.5)		151 (24.9)		.155		.08	[-.03, .19]	330 (26.7)	
No	449 (71.5)		455 (75.1)						904 (73.3)	
Fondling										
Yes	528 (84.1)		500 (82.5)		.460		.04	[-.07, .15]	1,028 (83.3)	
No	100 (15.9)		106 (17.5)						206 (16.7)	
Oral Sex										
Yes	86 (13.7)		57 (9.4)		.019		.13	[.02, .25]	143 (11.6)	
No	542 (86.3)		549 (90.6)						1,091 (88.4)	
Type of partner										
Stable	300 (47.8)		343 (56.6)		.002		.18	[.07, .29]	643 (52.1)	
Occasional	328 (52.2)		263 (43.4)						591 (47.9)	
Age of partner										
≤ 5 years	2 (.3)		1 (.2)		<.001	.41			3 (.2)	
< 2-4 years	30 (4.8)		10 (1.7)						40 (3.2)	
= years	567 (90.3)		364 (60.1)						931 (75.4)	
> 2-4 years	26 (4.1)		215 (35.5)						241 (19.5)	
≥ 5 years	3 (.5)		15 (2.5)						18 (1.5)	
Alcohol or drug use (last non- penetrative sexual contact)										
Yes	103 (16.4)		68 (11.2)		.008		.15	[.04, .26]	171 (13.9)	
No	525 (83.6)		538 (88.8)						1,063 (86.1)	

Note. n = number of adolescents who answered this question; M = mean; SD = standard deviation; V = Cramer's V; d = Cohen's d; CI = confidence interval.

^aDifferent answers could be selected at the same time.

Coital Sexual Behavior

In the case of penetrative sexual behavior (see Table 3), statistically significant differences were observed in terms of the age of the first vaginal sexual contact ($t(712) = -2.641$; $p = .008$) with a small effect size ($d = -.20$; 95% CI = $[-.34, -.05]$) and the first anal sexual contact ($t(121) = -5.099$; $p < .001$) with a large effect size ($d = -.96$; 95% CI = $[-1.35, -.57]$). The males reported having started at a younger age than the females. In the same vein, the results demonstrated that, compared to females, the males reported having a greater number of lifetime vaginal sexual partners ($t(712) = 4.164$; $p < .001$) with a small effect size ($d = .31$; 95% CI = $[.16, .46]$) and anal partners ($t(121) = 2.840$; $p = .005$; $d = .53$; 95% CI = $[.16, .91]$) with a medium effect size. Conversely, in relation to the frequency of alcohol or drug use during penetrative sexual contact in the past two months, no statistically significant differences were found on the basis of gender ($t(728) = .089$; $p = .929$; $d = .01$; 95% CI = $[-.14, .15]$) with a small effect size. Finally, with regards to the vaginal and anal sexual risk index, no statistically significant differences were found between males and females.

Data relating to condom use are displayed in Table 4. In total, 73.9% of males and 76.5% of females reported having used a condom in their first vaginal sexual contact, and no statistically significant differences were observed on the basis of gender ($\chi^2_{(1)} = .673$; $p = .412$) with a small effect size ($d = .06$; 95% CI = $[-.09, .21]$). With regards to condom use in the first anal sexual contact ($\chi^2_{(1)} = .005$; $p = .942$; $d = .01$; 95% CI = $[-.32, .34]$) and in the last penetrative sexual contact ($\chi^2_{(1)} = .017$; $p = .897$; $d = .01$; 95% CI = $[-.14, .15]$) no differences were found between males and females, with a small effect size in both cases. In relation to the type of contraceptives used in the last coital sexual relation, the condom was the most widely used method both in males (81.9%) and in females (81.4%).

The consistency of condom use in vaginal and anal sexual relations was subsequently calculated. To that end, the proportion between the number of sexual encounters with condom use and the number of total sexual encounters was ascertained (using the data relating to the past two months). This was done separately for anal and vaginal sexual relations. Secondly, the "proportion of condom use" variable was dichotomized as "consistent" in those cases in which the proportion of condom use was equal to 1, and as "inconsistent" when the value was less than 1. In Table 4, it can be observed that 46.8% of males and 47.6% of females reported an inconsistent condom use in their vaginal relations, and no differences were found on the basis of gender ($\chi^2_{(1)} = .031$; $p = .860$; $d = .01$; 95% CI = [-.15, .18]) with a small effect size. In the case of anal sex, 83% of males and 80% of females reported an inconsistent condom use, and no differences were found between males and females ($\chi^2_{(1)} = .098$; $p = .754$; $d = .07$; 95% CI = [-.40, .55]) with a small effect size.

Finally, with regards to the age of the partners with whom the adolescents had maintained penetrative sexual relations, it was demonstrated that while the males reported having partners of a similar age or 2-4 years younger, the females reported having older partners, and there were thus differences on the basis of gender with a medium effect size ($\chi^2_{(4)} = 129.105$; $p < .001$; $V = .42$).

Table 3. *Characteristics of Penetrative Sexual Behavior in Adolescents who have had Penetrative Sexual Contact, Differences According to Gender*

	Males (<i>n</i> = 365)			Females (<i>n</i> = 366)			Comparison by Gender			Total (<i>N</i> = 731)		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i> (<i>df</i>)	<i>d</i>	95% CI	<i>n</i>	<i>M</i>	<i>SD</i>
Age of first Vaginal sex	348	15.00	1.31	366	15.24	1.08	-2.641(712)**	-.20	[-.34, -.05]	714	15.12	1.21
Age of first Anal sex	79	15.25	1.25	44	16.45	1.24	-5.099(121)**	-.96	[-1.35, -.57]	123	15.68	1.37
No. of lifetime vaginal sex partners	348	3.09	3.90	366	2.13	2.01	4.164(712)**	.31	[.16, .46]	714	2.60	3.12
No. of lifetime anal sex partners	79	2.41	2.74	44	1.22	.52	2.840(121)**	.53	[.16, .91]	123	1.99	2.29
Frequency of penetrative sex under the influence of alcohol or drugs (past 2 months)	364	.55	1.81	366	.54	1.59	.089(728)	.01	[-.14, .15]	730	.55	1.71
Vaginal risk index (past 2 months)	269	.40	.68	309	.38	.64	.244(576)	.02	[-.14, .18]	578	.38	.65
Anal risk index (past 2 months)	47	1.06	.98	25	.76	.41	1.44(70)	.36	[-.14, .85]	72	.96	.83

Note. *n* = number of adolescents who answered this question; *M* = mean; *SD* = standard deviation; *t* = value of the t-student statistical; *df* = degrees of freedom; **p* < .05; ***p* < .01; *d* = Cohen's *d*; CI= confidence interval.

Table 4. Frequency and Percentage of Condom Use in the First Vaginal and Anal Sexual Encounter, Use and Types of Contraceptives in the Last Penetrative Sexual Encounter, Consistency of Condom Use in Anal and Vaginal Sexual Encounters and Age of Partner with whom Penetrative Sexual Relations have been Maintained, Differences According to Gender

	Males (n = 365)		Females (n = 366)		p	V	d	95% CI	Total (N = 731)	
	n	%	n	%					n	%
Condom use 1st vaginal sexual contact					.412		.06	[-.09, .21]		
Yes	257	73.9	280	76.5					537	75.2
No	91	26.1	86	23.5					177	24.8
Condom use 1st anal sexual contact					.942		.01	[-.32, .34]		
Yes	30	38.0	17	38.6					47	38.2
No	49	62.0	27	61.4					76	61.8
Use of contraceptives (last sexual relation)					.897		.01	[-.14, .15]		
Yes	293	80.3	296	80.9					364	80.6
No	71	19.5	70	19.1					366	19.3
^a Type of contraceptives used (last sexual relation)										
Condom					.800		.02	[-.13, .16]		
Yes	299	81.9	298	81.4					597	81.7
No	65	17.8	68	18.6					133	18.2
Withdrawal					.896		.01	[-.14, .15]		
Yes	66	18.1	65	17.8					131	17.9
No	298	81.6	301	82.2					599	81.9
Spermicidal cream					.156		.11	[-.04, .25]		
Yes	2	.5	.0	.0					2	.3
No	362	99.2	366	100					728	99.6
Contraceptive pill					.011		.19	[.04, .34]		
Yes	38	10.4	62	16.9					100	13.7
No	326	89.3	304	83.1					630	86.2
Condom use in vaginal sex (past 2 months)					.860		.01	[-.15, .18]		
Consistent	143	53.2	162	52.4					305	52.8
Inconsister	126	46.8	147	47.6					273	47.2
Condom use in anal sex (past 2 months)					.754		.07	[-.40, .55]		
Consistent	8	17.0	5	20.0					13	18.1
Inconsister	39	83.0	20	80.0					59	81.9
Age of partner					<.001	.42				
≤ 5 years	2	.5	1	.3					3	.4
< 2-4 years	41	11.2	4	1.1					45	6.2
= years	269	73.7	173	47.3					442	60.5
> 2-4 years	47	12.9	162	44.3					209	28.6
≥ 5 years	5	1.4	26	7.1					31	4.2

Note. n = number of adolescents who answered this question; V = Cramer's V ; d = Cohen's d ; CI = confidence interval.

^aDifferent answers could be selected at the same time.

Discussion

The objective of this study was to describe the non-coital and coital sexual behavior of adolescents and the differences on the basis of gender, in order to provide updated and useful information for the design and implementation of sex education and STI/HIV and unwanted pregnancy prevention programs.

With regards to the type of sexual experience, the results obtained in this study demonstrate, firstly, that 26.4% of Spanish adolescents aged between 14 to 20 years old reported that they had never had any type of sexual contact. This percentage is slightly higher than that found in other prior studies conducted among Spanish adolescents, which indicate that 15.2% of adolescents have never had sexual contact (García-Vega et al., 2012), 20% (Bermúdez, Buela-Casal, & Teva, 2011) and 18% (Teva et al., 2013). The very opposite has occurred in the case of the percentage of adolescents who have had penetrative sexual contact, taking into account that in this study the percentage is 27%, while in other studies carried out in recent years the percentages range between 30 and 36% (Bermúdez, Buela-Casal et al., 2011; García-Vega et al., 2012; Teva et al., 2013). However, in line with other studies (García-Vega et al., 2012; Navarro-Pertusa, Reig-Ferrer, Barberá, & Ferrer, 2006; Teva et al., 2013), a greater percentage of adolescents (46.5%) reported having had non-penetrative sexual contact. In relation to the differences in the type of sexual experience on the basis of gender, no differences were found in this study, which is in line with other studies (García-Vega et al., 2012; Navarro-Pertusa et al., 2006). Nevertheless, certain studies (Kotchick, Shaffer, Forehand, & Miller, 2001; Moreno, Muñoz, Pérez, & Sánchez) demonstrate that a

higher percentage of males engage in penetrative sexual relations compared to females; while another study conducted among Spanish adolescents (Bermúdez, Buela-Casal et al., 2011) has found that a higher percentage of females engage in penetrative sex compared to males. Upon comparing this most recent study with those that have been conducted in previous years, changes in the sexual behavior of adolescents in recent years can be observed. Specifically, the percentage of adolescents who have not had any type of sexual experience has increased and the percentage of those who engage in penetrative contact has decreased (Teva et al., 2013). This may be a sign that the preventive strategies on sexual risk behaviors conducted among the Spanish adolescent population could be having an impact on the age of sexual initiation. These data are indicative of the importance of this study, which makes it possible to observe the changes in the sexual behavior of adolescents, and thus verify the effects obtained by preventive measures in terms of sexual health.

With regards to non-penetrative sexual behavior, this study reveals that adolescent males engage in such behavior at an earlier age than females. These results are consistent with those found by other researchers (Bermúdez, Buela-Casal et al., 2011; García-Vega et al., 2012; Palenzuela, 2006; Upadhyay, Hindin, & Gultiano, 2006). Therefore, although there have been changes to the percentages of adolescents according to the type of sexual experience, as reported earlier, males continue to start at a younger age than females, which could be a result of gender roles and sexual double standards which increase the probability of HIV/STIs (Bermúdez, Castro, Gude, & Buela-Casal, 2011).

In the case of the types of non-penetrative sexual relations on the basis of gender, similar percentages were found both in males and females for behaviors such as kissing, fondling and masturbation. However, in the case of giving and receiving oral sex, in line with

other studies (García-Vega et al., 2012; Halpern & Haydon, 2012; Teva et al., 2013), males reported a greater frequency than females.

In terms of the partners with whom the adolescents have had non-penetrative sexual contact in the past two months, both males and females reported a similar number of partners, and no differences were found on the basis of gender, a fact that contrasts with the findings of other studies in which the males engaged in non-penetrative sexual behavior with a greater number of partners than females (Bermúdez, Buena-Casal et al., 2011; García-Vega et al., 2012). A possible explanation for this result is that sexual patterns between males and females could be demonstrating a trend towards similarity. However, in this study the same gender differences as those revealed in other previous studies can be observed, showing that a higher percentage of males engage in non-penetrative sexual contact with occasional partners than females (Bermúdez, Buena-Casal, et al., 2011; Teva et al., 2009a) and, with regards to the age of the partner, females continue to maintain sexual relations with older partners, while males have relations with partners of a similar age or younger (Chapman et al., 2010; Morrison-Beedy, Xia, & Passmore, 2013).

It is also important to point out that 14% of adolescents reported having consumed alcohol or other drugs during their last sexual contact, and males reported a higher degree of consumption than females during their last non-penetrative sexual contact. Although these results are slightly lower than those found in other studies (Bermúdez, Buena-Casal et al., 2011; García-Vega et al., 2012), they are important in the respect that alcohol and drug use has been linked to sexual risk behavior, such as sexual behavior without the use of a condom (Espada et al., 2013; Thepthien et al., 2016) and unwanted pregnancies (Panova, Kulikov, Berchtold, & Suris, 2016). Nevertheless, it is a sign that prevention in relation to sexual health is yielding results.

With regard to penetrative sexual behavior, the average age of vaginal sex initiation is around 15 years old and around 15.7 years old for anal sex. In both cases, males start slightly earlier than females. These data are similar to those found by other researchers, in which it can be observed that vaginal sex initiation precedes anal sex initiation and, furthermore, males engage in both sexual practices at an earlier age than females (Halpern & Haydon, 2012; Teva et al., 2013). Despite the fact that there is contradictory evidence concerning the link between an early initiation in penetrative sexual behavior and the risk of contracting STIs/HIV (Heywood, Patrick, Smith, & Pitts, 2015), most studies show a positive relationship between both variables (Else-Quest, Hyde, & DeLamater, 2005; Lara & Abdo, 2016; Olesen et al., 2012; Rissel, Richters, Grulich, de Visser, & Smith, 2003; Sandfort, Orr, Hirsch, & Santelli, 2008). In the same vein, in accordance with this study, males have a greater number of partners in their lifetime with whom they have had anal and vaginal sex compared to females. This result is in line with those found in other studies in which starting sexual relations at an early age is associated with a greater number of lifetime penetrative sex partners (Baumann, Belanger, Akre, & Suris, 2011; Buttmann, Nielsen, Munk, Liaw, & Kjaer, 2011; Olesen et al., 2012).

In relation to the frequency of alcohol or drug use in penetrative sexual relations in the past two months, and the vaginal and anal sexual risk indices, in this study no differences on the basis of gender have been found, as is the case of previous studies (Teva et al., 2013). Nevertheless, it is worth noting that both the vaginal and anal sexual risk indices indicate that adolescents engage in sexual risk behaviors and, to a greater extent, in the case of anal sex behavior. The fact that condoms are not used as frequently when having anal sex than when having vaginal sex is most probably because there is no risk of an unwanted pregnancy, thus

ignoring the risk of contracting STIs/HIV (Kelly-Hanku et al., 2013; McBride & Fortenberry, 2010).

Another behavior that has been linked to the risk of contracting STIs/HIV is the non-use of condoms during the first penetrative sexual contact (Lameiras, Faílde, Bimbela, & Alfaro, 2008; Yotebieng, Halpern, Mitchell, & Adimora, 2009) or the inconsistent use of condoms (Espada et al., 2014; Faílde, Lameiras, & Bimbela, 2008; Teva et al., 2013). In this study, almost 25% of the sample of adolescents reported not having used a condom during their first penetrative sexual contact, and no differences were found on the basis of gender. This is important, taking into account that a prior study conducted among Spanish adolescents revealed that 12% of adolescents reported not having used a condom in their first coital encounter (Teva et al., 2009a). Therefore, the number of adolescents who do not use a condom in their first coital encounter has doubled in the past decade. In this study, 20% of adolescents reported not having used a condom in their last coital encounter. This percentage has thus increased compared to that found by Teva et al. (2013) which was 16%. Furthermore, 47.2% of adolescents use condoms inconsistently in vaginal sexual relations, and 81.9% in anal relations. These results also point to an increase in the percentage of adolescents who use condoms inconsistently, taking into account that in the study carried out by Teva et al. (2013), it was reported that 36% of adolescents use condoms inconsistently in vaginal sexual relations and 55% in the case of anal sexual relations. Thus, it can be stated that adolescents continue to engage in sexual risk behaviors and to a greater extent, and as a result, they continue to expose themselves to the risk of contracting STIs/HIV and unwanted pregnancies. With regards to the type of contraception used in the last coital sexual contact, adolescents use condoms to a greater extent than any other type of contraception, results which are in line with those found in other studies (García-Vega et al., 2012; Teva et al., 2013). It is worth

noting that 20% of adolescents reported having used the "withdrawal" method as a contraceptive method, which once again demonstrates their exposure to the risk of contracting STIs/HIV and their lack of knowledge about such practices. Finally, in relation to the age of partners, the same trend as that demonstrated in the previous study with regards to non-penetrative sexual behavior has been found. Specifically, it has been revealed that females have coital sexual relations with older partners, while males have relations with partners of a similar age or younger. In several studies, the fact that females have older partners has been linked to a greater degree of sexual risk behaviors and the probability of contracting STIs/HIV (Beauclair et al., 2016; Chapman et al., 2010; Morrison-Beedy et al., 2013).

Practical Implications

From a gender perspective, the results of the study demonstrate that males engage in non-penetrative behavior and vaginal and anal sex at an earlier age than females; display a greater frequency in oral sex practices; a greater number of anal and vaginal sex partners; a greater frequency of non-penetrative sexual contact under the influence of alcohol and other drugs; and that females have penetrative and non-penetrative sexual relations with older partners, while males have partners of a similar age or younger. However, no differences can be observed on the basis of gender in terms of condom use and the vaginal and anal risk indices. These results could be linked to the gender roles and stereotypes traditionally associated to males and females (Cummings, Auerswald, & Ott, 2014; García-Vega et al., 2012; Macleod & Jearey-Graham, 2016). Gender roles are defined as the behavior, characteristics, roles and dynamics that are considered acceptable from a cultural point of view for men and women, based on expectations and norms that are widely shared within a society (WHO, 2007). In a sexual context, males are expected to be more dominant, knowledgeable and experienced than females in terms of sex (Greig, Peacock, Jewkes, &

Msimang, 2008; Reidy, Brookmeyer, Gentile, Berke, & Zeichner, 2016; Zuo et al., 2012), while females are expected to be more submissive and passive than males (Hundhammer & Mussweiler, 2012; Vannier & O'Sullivan, 2012). In several studies, stereotypical gender norms have been linked to a greater possibility of sexual risk behavior. Thus, in contrast to females, males tend to have their first sexual experience at an earlier age, a greater number of partners and they engage in a greater number of sexual relations under the influence of alcohol or other drugs (Courtenay, 2000; Heise & Elias, 1995; Mahalik et al., 2013; Reidy et al., 2016). Females tend to have older partners and have less self-efficacy and less negotiation power in the case of condom use (García-Vega et al., 2012; Jewkes, Dunkle, Nduna, & Shai, 2010; Vannier & O'Sullivan, 2012).

As a result, the findings of this study make it possible to obtain useful information on gender differences and the specific point of development of sexual behavior, the use of alcohol and other drugs and the frequency of condom use in different sexual practices, along with the types of partners with whom adolescents engage in sexual relations. All of this information is extremely useful for the design of STI/HIV and sex education prevention programs, taking into account the gender perspective (Teitelman et al., 2016). Furthermore, the results demonstrate the need to intervene at an early age, before adolescents engage in their first coital relationship (Reis, Ramiro, Matos, & Díniz, 2013; Upadhyay et al., 2006).

Limitations and Future Lines of Research

Although this study is an important contribution to research on sexual behavior in adolescents based on a gender perspective, it is not without its limitations. Firstly, a cross-sectional design was employed for this study. It would therefore be interesting to use longitudinal designs for future lines of research, to provide information on the evolution of sexual behavior over time. Furthermore, this study includes a representative sample of

adolescents who attend school, so it does not take into account those adolescents who do not attend school or who play truant. It is worth noting that schooling is compulsory in Spain for individuals up to 16 years of age, so this would mainly affect the older students of the sample. Likewise, the sample corresponds to the Spanish population and the results and conclusions drawn from the study on the sexual behavior of adolescents should therefore not be extrapolated to other populations given that, as stated in many studies, the cultural values of society influence sexual behavior (Bermúdez, Castro, & Buéla-Casal, 2011; Bermúdez et al., 2010; Giménez-García, Ballester-Arnal, Gil-Llario, Cárdenas-López, & Duran-Baca, 2013). Therefore, as a future line of research, it would be advisable to ascertain whether the results of this study also apply within other cultural environments. It would also be extremely interesting to discover whether there are differences in sexual behavior on the basis of sexual orientation and how this affects the experience of adolescents in their romantic relationships and the variables associated to the dyadic interaction between adolescents in terms of sexual risk behavior.

Conclusions

The results of this study reveal, first of all, that compared to studies carried out in the past decade, changes can be observed in the sexual behavior of Spanish adolescents in recent years. Specifically, the percentage of adolescents who have not had any type of sexual experience has increased and the percentage of those who have engaged in penetrative sex has decreased (Teva et al., 2013). Nevertheless, it is worth noting that a significant percentage of adolescents continue to engage in sexual risk behavior and, as a result, they continue to expose themselves to the risk of contracting STIs/HIV and unwanted pregnancies from an early age. It is therefore necessary to intervene before adolescents have their first coital relationship. Likewise, the gender differences found with regards to the different sexual

behaviors (for example, the age of the first non-penetrative vaginal and anal sexual contact, the number of non-penetrative sexual encounters under the effects of alcohol, the number of anal and vaginal sex partners and the age of the partners with whom sexual relations were maintained) emphasize the need to intervene and educate adolescents on the prevention of STIs/HIV and unwanted pregnancies, taking into account a gender perspective. However, the results found in this study also reveal that there are no gender differences in the case of other sexual behaviors (for example, the number of non-penetrative sexual partners, certain types of sexual contacts such as kissing, fondling or masturbation, condom use in the first and last penetrative anal and vaginal sexual contact, the consistent use of condoms in anal and vaginal sexual relations, and alcohol and drug use in penetrative sexual contacts), which could imply that sexual patterns between males and females are demonstrating a trend towards similarity.

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Compliance with Ethical Standards

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

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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

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