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Original

Sexism's influence in sex education programs: An empirical study[☆]

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ABSTRACT

In recent years, ample evidence has accumulated indicating the advantage of sexual health programs that incorporate a gender perspective. However, to our knowledge, there are no empirical studies on the influence of sexist attitudes on the effectiveness of sex education programs. This study aims to demonstrate that sexism has a negative impact on the results obtained by sex education programs in the prevention of sexual risks through two studies. Study 1 tests whether a sex education program differs in effectiveness based on the level of *Ambivalent Sexism* (ASI) and *Sexual Double Standard* (DSS). The sample was composed by 293 Basque-speaking adolescents from nine secondary schools in the Basque Country ($M = 15.56$, $SD = 0.63$, range: 15–17). Study 2 analyses whether introducing training aimed at reducing levels of sexism achieves that the sexual education program obtains similar results in young people with high and low sexism—ASI, DSS and the *Inventory of Distorted Thoughts on Women and Violence* (IDTWV). The sample is made up of 340 Basque-speaking adolescents from eight secondary schools in the Basque Country ($M = 15.54$, $SD = 0.57$, range: 15–17). Results point to the relevance of including gender perspective in sexual education programs aimed toward reducing sexism, especially sexual double standards, in order to increase its effectiveness in the prevention of sexual risks.

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La influencia del sexismo en los programas de educación sexual: un estudio empírico

RESUMEN

En los últimos años se ha ido acumulando una amplia evidencia que indica la superioridad de los programas de salud sexual que incluyen una perspectiva de género. Sin embargo, hasta donde sabemos, no existen estudios empíricos sobre la influencia que tienen las actitudes sexistas en la eficacia de los programas de educación sexual. Este estudio tiene por objeto demostrar que el sexismo impacta de forma negativa en los resultados obtenidos por los programas de educación sexual en la prevención de riesgos sexuales a través de dos estudios. El Estudio 1 comprueba si un programa de educación sexual difiere en su eficacia en función del nivel del *Sexismo Ambivalente* (ASI) y del *Doble Estándar Sexual* (DSS). Participan 293 adolescentes euskoparlantes de nueve centros de secundaria del País Vasco ($M = 15.56$, $DT = 0.63$, rango: 15–17). El Estudio 2 analiza si introducir una formación dirigida a disminuir los niveles de sexismo logra que el programa de educación sexual obtenga resultados similares en adolescentes con alto y bajo

Palabras clave:

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sexismo -ASI, DSS e Inventario de Pensamientos Distorsionados sobre la Mujer y la Violencia (IPDMV)-. La muestra está formada por 340 adolescentes euskoparlantes de ocho centros de secundaria del País Vasco ($M = 15.54$, $DT = 0.57$, rango: 15–17). Los resultados apuntan la pertinencia de incluir en los programas de educación sexual la perspectiva de género dirigida a disminuir el sexismo, especialmente la doble moral sexual, a fin de incrementar su eficacia en la prevención de riesgos sexuales.

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Introduction

Currently, sex education aimed at adolescents is of great necessity (Haberland & Rogow, 2015). Although adolescents may seem to be well informed, they present high levels of risk and they tend, on the one hand, not to use effective preventive methods and, on the other, to begin sexual intercourse at an earlier and earlier age (Cederbaum et al., 2017). The models most frequently applied to sexual protection against sexual risks—such as unplanned pregnancy (UP), sexually transmitted infections (STIs), or HIV—have been: the theory of reasoned action and planned behavior (Montaño & Kasprzyk, 2015), social learning theory (Bandura, 1997), and the health belief model (Green et al., 2020). These models gather together the essential content that should be included in interventions aimed at reducing the risk of sexual transmission of UP, STIs, or HIV/AIDS (see Ubillos, 2007). This includes perception of risk, perception of the costs and benefits of condom use, perception of control and self-efficacy, intention to use a condom, and cognitive factors, such as knowledge of STIs.

Several studies have established a close relationship between risky sexual behaviors and sexist beliefs. In this regard, Ramiro-Sánchez et al. (2018) found that hostile sexism in adolescent men is associated with reduced use of the condom. Fitz and Zucker (2015) concluded that, in women, adherence to a traditional role is predictive of less power in a relationship and, therefore, less self-efficacy in the use of preventive methods. In men, it is related to negative attitudes toward condom use and showing less intention to use them (Ramiro-Sánchez et al., 2018). Fante-Coleman et al. (2019) link sexism with various risky sexual behaviors that increase the risk of HIV and STIs. De Meyer et al. (2014) find that sexually active adolescents with a traditional gender ideology present decreased use of preventive measures and more negative sexual relationships. Therefore, it appears that gender roles may act to mediate sexual behaviors through sexist attitudes. However, there are very few studies on the relationship between these types of variables among Spanish adolescents, while, in other countries, the only studies carried out have been among racial minorities or university students (Ramiro-Sánchez et al., 2018).

According to the congruence hypothesis, attitudes bias the processing of information in favor of material that is congruent with them (Maio et al., 2018). When sexist attitudes are inconsistent with the information provided in sex education programs, adolescents may: (a) selectively perceive information and choose to believe that relationships with their sexual partners do not carry any risk; (b) devalue information concerning condom use, telling themselves that its costs are more important than its benefits; and/or (c) try to forget information about sexual risks and condom use through processes of selective retention. If sexist individuals seek information congruent with their beliefs and if they experience negative emotions toward this new information, then they are also likely to employ avoidance and mistrust of information as a strategy to reduce dissonance (Tsang, 2017). In light of this, one might surmise that among adolescents with more sexist attitudes and norms, the effectiveness of sex education programs would be significantly impacted by expanding their knowledge of sexuality and risk prevention.

In recent years, ample evidence has accumulated concerning the superiority of sexual health programs that include a gen-

der perspective over those that are gender neutral. However, to our knowledge, there are no empirical studies that analyze the influence of sexist attitudes on the effectiveness of sex education programs (Haberland & Rogow, 2015). Therefore, Study 1 tests whether a sex education program differs in its effectiveness in preventing sexual risks in relation to the level of sexism in the participants. Study 2, meanwhile, offers an analysis of whether the introduction of training aiming at reducing levels of sexism enables sex education programs to obtain similar results in people with high and low sexism.

Study 1: Influence of sexism on the effectiveness of a sex education program

Method

Participants

Nonprobability sampling was applied. The study relied on the voluntary participation of schools. The selection of educational centers was random and stratified by type of center (public/charter school) and school year (10th grade/first year of Bachillerato [non-compulsory 11th grade education]) among the 17 contacted. The study was carried out during the second semester of the 2014–15 academic year and the first semester of the 2015–16 academic year. The sample was made up of 293 Basque-speaking adolescents (152 girls and 141 boys; Age: $M = 15.56$, $SD = 0.63$, range = 15–17; 10th grade = 60.8% and first year of Bachillerato = 39.2%) from nine secondary schools in the Basque Country (five public and four charter).

Instruments

Perception of control and self-efficacy (Levinson's Contraceptive Self-efficacy Instrument, 1986; Ubillos, 1995; Ubillos et al., 1999). Evaluates the capacity for control in situations of sexual intimacy. It consists of 10 items, with a Likert scale (1 = completely disagree to 6 = completely agree) (pretest: $\alpha = .79$, $\omega = .72$, $CR = .9058$, $AVE = .39$; posttest: $\alpha = .84$, $\omega = .80$, $CR = .68$, $AVE = .45$).

Perception of risk of UP and AIDS (Condelli, 1986). Four items measuring the perceived risk of UP (two items) and AIDS (two items) with the use of and without the use of a condom. The response range is from 1 = entirely unlikely to 6 = entirely likely. To determine the perception of risk, the independent risk perception items relating to when a condom is used are subtracted from those relating to when a condom is not used, obtaining an indicator for UP and another for AIDS.

Costs and benefits of condom use. Adaptation of the scales used in the *Knowledge, Attitudes, Beliefs, and Practices* (KABP) surveys to examine the perception of costs (12 items) and benefits (six items) of condom use (Ubillos, 1995; Ubillos et al., 1999). Responses are gathered using a Likert scale (1 = completely disagree and 6 = completely agree). *Benefits* (pretest: $\alpha = .64$, $\omega = .78$, $CR = .63$, $AVE = .47$; posttest: $\alpha = .77$, $\omega = .91$, $CR = .63$, $AVE = .45$). *Costs* (pretest: $\alpha = .69$, $\omega = .82$, $CR = .77$, $AVE = .54$; posttest: $\alpha = .77$, $\omega = .93$, $CR = .79$, $AVE = .52$).

Knowledge (Ubillos, 1995; Ubillos et al., 1999). Forty-two items on condom use, UP, interrupted sexual intercourse, and myths about the sexual transmission of HIV that are grouped into one dimension. The response options are: *true, false, don't know*

Chart 1

Description of the program. Content matter and learning objectives

Sessions	Content matter	Learning objectives
1 st session	Pretest assessment	
2 nd session	Concept and functions of sexuality, orientation of desire, etc. Sexual behaviors: autoeroticism and sexual intercourse.	Analyze attitudes and prior knowledge regarding sexuality. Eliminate myths concerning autoeroticism and one's initial acts of sexual intercourse. Clarify the differences and similarities between the two sexes. Encourage communication about sex between peers. Understand the phases of human sexual response and how they relate to risky sexual behaviors.
3 rd session	Human sexual response. Risky sexual behaviors Costs and benefits of condom use	Provide information about risky sexual behaviors. Reduce the perception of costs and increase the perception of benefits in condom use.
4 th session	Risk perception, perception of control, and self-efficacy	Increase risk perception concerning unprotected sex. Reinforce the safe sex message. Raise awareness concerning the illusion of control. Supply self-efficacy skills for negotiating condom use.
5 th session	Condom use Posttest assessment	Know the rules of condom use. Provide training on its use in different situations.

Note. The content matter was adapted to the number of sessions (five or six).

Table 1

Cut-off points for the high and low levels of ambivalent sexism and the sexual double standard

	Hostile sexism		Benevolent sexism		Sexual double standard	
Mean (SD)	2.79 (0.68)		2.80 (0.69)		2.36 (0.70)	
Minimum score	1.00		1.00		1.00	
Maximum score	4.64		4.91		4.14	
	<i>n</i>	Cut-off point	<i>n</i>	Cut-off point	<i>n</i>	Cut-off point
Low sexism	69	2.36	73	2.38	79	1.86
High sexism	77	3.27	74	3.27	69	2.86

(pretest: $\alpha = .86$, $\omega = .83$, CR = .91, AVE = .45; posttest: $\alpha = .89$, $\omega = .86$, CR = .91, AVE = .50).

Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996; Ubillos et al., 2014). Evaluates *Hostile Sexism* (HS) and *Benevolent Sexism* (BS). Consists of 22 items that are answered on a scale ranging from 1 = completely disagree to 5 = completely agree. BS (pretest: $\alpha = .82$, $\omega = .88$, CR = .80, AVE = .51; posttest: $\alpha = .83$, $\omega = .89$, CR = .81, AVE = .47). HS (pretest: $\alpha = .87$, $\omega = .97$, CR = .86, AVE = .50; posttest: $\alpha = .89$, $\omega = .98$, CR = .89, AVE = .54).

The Sexual Double Standard (SDS; Caron et al., 1993; Ubillos et al., 2016). Seven items that are responded to using a scale from 1 = completely disagree to 5 = completely agree (pretest: $\alpha = .77$, $\omega = .73$, CR = .78, AVE = .54; posttest: $\alpha = .79$, $\omega = .71$, CR = .79, AVE = .46).

All the scales were translated into Basque using the back translation method (Balluerka et al., 2007). The items in their original versions (Spanish/English) were independently translated into Basque by two bilingual researchers. Two other translators independently carried out the direct translation from Basque into the original version. Finally, the four translators verified that the meanings of the items in the original version were equivalent to those of the adapted version.

Procedure

The study was approved by the ethics committee for research with human beings (CEISH) at the University of the Basque Country (April 30, 2015). First of all, we contacted those responsible at the educational centers that had agreed to participate. Following the receipt of informed consents, four researchers (psychologists with expertise in sexology and gender, from the *Lahia-Nahia Sexologia Elkarte* [Lahia-Nahia Sexology Association]) from outside the schools administered the battery of scales before and after the application of the program. The analysis and interpretation of the results was carried out by two other people with PhDs in psychology.

Intervention program

The four psychologists administering the evaluations applied this intervention (designed ad hoc for this study), of duration 10–12 h and distributed into five to six sessions of two hours each—in line with the average duration of the most effective programs (Kirby et al., 2007). The sessions were implemented over a period of 21 days, within school hours. Chart 1 describes the program, which was based on the variables proposed by the theory of reasoned action, planned behavior, social learning, and the health belief model (Ubbilos, 2007).

Statistical analyses

A pre-experimental design was employed, without a control group. We created two groups, using as their criteria the cut-off points at the 25th (low) and 75th (high) percentiles obtained from the responses given to the ASI and SDS in the pretest (Table 1). Centile scores were taken as the criterion to establish the cut-off point on the basis of, firstly, the recommendations of authors such as Linn and Gronlund (2000), and, secondly, the ability to establish comparisons with other studies, such as that of Garaigordobil and Aliri (2013).

Internal consistency was measured using Cronbach's alpha, Omega indices (ω), composite reliability (CR), and the average variance extracted (AVE). We used the OMEGA program (Watkins, 2013) and Mplus 8.1. For the purpose of testing the equivalence of the two conditions (high/low sexism), an analysis of variance (ANOVA) was applied to the study's pretest scores. To evaluate the effectiveness of the program, paired samples Student's *t* tests were performed. We performed an analysis of the covariance (ANCOVAs) of the change scores (CS)—posttest minus pretest—obtained by the high- and low-sexism groups, controlling the scores obtained in the pretest, in order to verify the effectiveness of the sex education program in relation to the level of sexism. Effect sizes were estimated using Cohen's *d* (low effect size: $d = 0.2$, medium: $d = 0.5$, high: $d = 0.8$) (Cohen, 2013).

Table 4
Analysis of the covariance of posttest/pretest differences for the low and high sexism groups

Dependent variables	Low-HS n = 69		High-HS n = 77		ANCOVA			Low-BS n = 73		High-BS n = 74		ANCOVA			Low-SDS n = 79		High-SDS n = 69		ANCOVA		
	M (SD)		M (SD)		Post-Pre			M (SD)		M (SD)		Post-Pre			M (SD)		M (SD)		Post-Pre		
	F	p	F	p	F	p	d	F	p	F	p	F	p	d	F	p	F	p	F	p	d
Knowledge	6.87 (5.20)		5.03 (7.41)		12.43	.001	0.59	6.16 (4.66)		5.16 (7.29)		5.41	.021	0.39	6.68 (4.20)		5.67 (8.88)		15.02	.0001	0.64
Benefits of condom use	0.25 (0.72)		0.09 (0.61)		5.26	.023	0.38	0.35 (0.74)		0.19 (0.70)		2.82	.095	0.28	0.32 (0.67)		0.14 (0.72)		12.07	.001	0.58
Costs of condom use	-0.38 (0.65)		-0.14 (0.60)		12.20	.001	0.59	-0.36 (0.64)		-0.22 (0.73)		5.27	.023	0.38	-0.49 (0.45)		-0.18 (0.85)		30.44	.0001	0.91
Risk perception of UP	0.84 (1.69)		0.49 (2.02)		1.33	.250	0.19	0.97 (1.83)		0.53 (1.62)		0.20	.657	0.06	0.62 (1.71)		0.67 (2.00)		0.44	.508	0.11
Risk perception of AIDS	0.51 (1.35)		0.62 (2.44)		1.01	.316	0.17	0.74 (1.97)		0.41 (1.89)		0.00	.984	0.00	0.42 (2.05)		0.49 (2.74)		0.61	.437	0.13
Perception of control	0.01 (0.67)		-0.03 (0.54)		8.58	.004	0.49	0.06 (0.71)		0.03 (0.62)		3.78	.054	0.33	0.17 (0.68)		0.01 (0.52)		18.56	.0001	0.71
Intention to use a condom	-0.06 (0.64)		0.18 (0.75)		0.12	.729	0.06	0.16 (0.63)		-0.04 (0.42)		5.00	.027	0.37	0.02 (0.78)		0.02 (0.79)		1.11	.293	0.18

Note. HS: Hostile Sexism, BS: Benevolent Sexism, SDS: Sexual Double Standard, UP: Unplanned Pregnancy.

$\alpha = .86$, $\omega = .011$, $CR = .80$, $AVE = .22$; posttest: $\alpha = .88$, $\omega = .010$, $CR = .67$, $AVE = .13$). F_2 (pretest: $\alpha = .73$, $\omega = .80$, $CR = .87$, $AVE = .47$; posttest: $\alpha = .83$, $\omega = .90$, $CR = .80$; $AVE = .52$). The $F1$ analyses are not presented below because its psychometric properties were inadequate.

Procedure and intervention program

The procedure was similar to Study 1. The same four researchers were responsible for administering the questionnaire and an intervention program of duration 10 to 12 hours. The same type of intervention was carried out as in Study 1, but with the additional inclusion in the first session of content dealing with sexist beliefs and attitudes.

Statistical analyses

We used a pre-experimental design without a control group. First, the comparison groups were created on the basis of the cut-off points established at the 25th and 75th percentiles of the three scales used to measure sexism (ASI, SDS, and IPDMV) in the pretest (Table 5).

Second, to check whether the two conditions (high/low sexism) were equivalent, ANOVAs were applied in the pretest. Third, Student's t tests were performed on the relevant samples in order to compare the scores obtained before and after the intervention. Fourth, ANCOVAs were applied to the CSs (posttest minus pretest) obtained in the high- and low-sexism groups, controlling the pretest scores. In all analyses, Cohen's d was applied in order to find the effect sizes of the mean differences.

Results

Differences between the pretest scores of the high- and low-sexism groups

The low-sexism groups obtained better scores in practically all variables by comparison with the high sexism groups. The differences were significant in *knowledge*, *perception of control*, and *intention to use a condom*, although the effect sizes were small (Table 6).

Effectiveness of the sex education and sexism prevention program

The results confirm the program's effectiveness in improving *knowledge*, the *perception of costs and benefits derived from condom use*, the *perception of risk of AIDS*, and the *capacity for control* when faced with risky sexual situations. The effect sizes were low, with the exception of *perception of costs of condom use*, which was medium, and *knowledge*, which was high (Table 7). In addition, following the program, participants presented a lower level of *ambivalent sexism* and *sexual double standards* and lower agreement with the *acceptance of mistreatment of women and legitimization of violence* (F2 IPDMV). The effect sizes were low.

Effectiveness of the sex education program in relation to the level of sexism

In general, the high- and low-sexism groups did not differ on any of the seven indicators. In respect of the groups with high and with low adherence to the SDS, the only significant differences were in *knowledge* and in *perception of risk of UP*. The effect sizes were small (Table 8).

Discussion

Study 1 provides empirical evidence in support of both the effectiveness of the sex education program and, importantly, the claim that there are differences in the changes that the program produces in people according to the level of *ambivalent sexism* and adherence to the *sexual double standard*. In all cases, the groups with a

Table 5
High and low sexism cut-off points in ASI, SDS, and IPDMV

	Hostile sexism		Benevolent sexism		Sexual double standard		F2-IPDMV	
Mean (SD)	2.71 (0.63)		2.94 (0.59)		2.50 (0.63)		1.93 (0.41)	
Minimum score	1.00		1.00		1.00		1.00	
Maximum score	5.00		5.00		5.00		3.54	
	<i>n</i>	Cut-off point	<i>n</i>	Cut-off point	<i>n</i>	Cut-off point	<i>n</i>	Cut-off point
Low sexism	76	2.27	92	2.55	71	2.14	101	1.67
High sexism	94	3.09	85	3.35	74	2.86	77	2.20

Table 6
Differences between high- and low-sexism groups in the pretest

Dependent variables	Low- <i>HS</i> (<i>n</i> = 76)	High- <i>HS</i> (<i>n</i> = 94)	ANOVA			Low- <i>BS</i> (<i>n</i> = 92)	High- <i>BS</i> (<i>n</i> = 85)	ANOVA			Low- <i>SDS</i> (<i>n</i> = 71)	High- <i>SDS</i> (<i>n</i> = 74)	ANOVA			Low F2-IPDMV (<i>n</i> = 101)	High F2-IPDMV (<i>n</i> = 77)	ANOVA					
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Pre-test			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Pre-test			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Pre-test			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Pre-test					
			<i>F</i>	<i>p</i>	<i>d</i>			<i>F</i>	<i>p</i>	<i>d</i>			<i>F</i>	<i>p</i>	<i>d</i>			<i>F</i>	<i>p</i>	<i>d</i>	<i>F</i>	<i>p</i>	<i>d</i>
Knowledge	25.68 (6.02)	25.28 (7.21)	.155	.694	0.06	25.25 (7.07)	24.84 (6.20)	.171	.680	0.06	26.31 (6.18)	25.22 (6.83)	1.02	.315	0.17	26.48 (7.02)	24.18 (6.34)	5.07	.026	0.34			
Benefits of condom use	4.87 (0.45)	4.71 (0.76)	2.54	.113	0.25	4.83 (0.64)	4.72 (0.64)	1.29	.257	0.17	4.84 (0.69)	4.74 (0.57)	0.88	.350	0.15	4.82 (0.67)	4.66 (0.69)	2.20	.140	0.22			
Costs of condom use	2.89 (0.57)	2.95 (0.67)	.408	.524	0.09	3.02 (0.68)	3.02 (0.71)	.000	.991	0.00	2.94 (0.63)	2.99 (0.66)	0.27	.606	0.09	2.99 (0.73)	3.03 (0.67)	.126	.723	0.06			
Risk perception of UP	1.84 (1.77)	2.05 (1.62)	.654	.420	0.13	1.78 (1.70)	1.86 (1.66)	.091	.763	0.06	1.96 (1.64)	1.80 (1.64)	0.35	.557	0.09	1.74 (1.77)	1.96 (1.82)	.648	.422	0.13			
Risk perception of AIDS	2.76 (1.49)	2.60 (1.38)	.578	.448	0.11	2.78 (1.39)	2.45 (1.55)	2.31	.130	0.23	2.80 (1.39)	2.57 (1.40)	1.03	.313	0.17	2.65 (1.57)	2.51 (1.57)	.383	.537	0.09			
Perception of control	4.77 (0.48)	4.62 (0.63)	3.02	.084	0.27	4.88 (0.49)	4.66 (0.61)	6.56	.011	0.39	4.82 (0.54)	4.74 (0.59)	0.82	.368	0.15	4.85 (0.48)	4.66 (0.58)	5.66	.018	0.36			
Intention to use a condom	5.80 (0.68)	5.78 (0.51)	.027	.870	0.00	5.82 (0.57)	5.73 (0.63)	.968	.327	0.15	5.91 (0.33)	5.79 (0.52)	2.92	.090	0.29	5.86 (0.40)	5.68 (0.75)	4.21	.042	0.31			

Note. HS: Hostile Sexism, BS: Benevolent Sexism, SDS: Sexual Double Standard, F2-IPDMV: Acceptance of Mistreatment of Women and Legitimation of Violence as an Educational Strategy, UP: Unplanned Pregnancy.

Table 7

Differences between pretest and posttest for the sex education and sexism prevention program

Variables	Pretest	Posttest	Student's <i>t</i> tests		Cohen's <i>d</i>
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>t</i> ₍₃₃₉₎	<i>p</i>	
Knowledge	25.17 (6.44)	31.38 (5.08)	-15.401	.0001	1.07
Benefits of condom use	4.74 (0.68)	5.01 (0.72)	-5.234	.0001	0.39
Costs of condom use	2.97 (0.67)	2.59 (0.59)	9.594	.0001	0.60
Risk perception of UP	1.81 (1.72)	2.07 (2.36)	-1.641	.102	0.13
Risk perception of AIDS	2.57 (1.51)	3.04 (1.93)	-3.715	.0001	0.27
Perception of control	4.73 (0.55)	4.85 (0.66)	-2.936	.010	0.20
Intention to use a condom	5.78 (0.59)	5.69 (0.85)	-1.699	.090	0.12
Escalas de Sexismo					
Hostile sexism	2.71 (0.63)	2.46 (0.70)	6.144	.0001	0.38
Benevolent sexism	2.94 (0.59)	2.69 (0.63)	6.476	.0001	0.41
Sexual double standard	2.58 (0.53)	2.36 (0.58)	5.936	.0001	0.40
IPDMV	1.95 (0.33)	1.91 (0.42)	1.456	.147	0.11
F2-IPDMV	1.93 (0.41)	1.85 (0.46)	2.841	.010	0.18

Note. UP: Unplanned Pregnancy, IPDMV: Inventory of Distorted Thoughts about Women and Violence, F2-IPDMV: Acceptance of Mistreatment of Women and Legitimation of Violence as an Educational Strategy.

low level of sexism showed better results derived from the application of the program compared to the groups with a high level of sexism. These results offer further evidence of the effect of attitudes on information processing (Maio et al., 2018). According to the theory of social judgment (Marsh & Wallace, 2014), attitudes such as the above, through assimilation and contrast processes, can lead to biased perceptions of information, resulting in beliefs concerning the validity of the information contained in the message. Thus, messages that fall within the attitude of acceptance lead one to believe that the arguments are valid and good, while arguments in support of a position far removed from the one's own attitudinal position are perceived as weak.

Personal motivation, the capacity to process information, and the attitude toward the message—in this case, sexual risk prevention messages from a feminist perspective—may have been the causes of selective exposure to the information (Albarracín & Shavitt, 2018). The fact of receiving information relating to sexual protection that is based on an attitude of opposition to sexism causes people with a higher level of sexism to interpret these messages as not congruent with their prior attitude, to decrease in their personal motivation, and to perceive that the information is of low quality. As a consequence, the explanations provided in the program will not be paid attention to, encoded, and/or remembered, as they challenge the attitudes of said subject. By contrast, people who show low levels of sexist attitudes will select and remember the information offered to them by the programs, which implies greater changes in knowledge, attitudes, and intentions.

Specifically, the results show that adherence to the *sexual double standard* had a greater impact on the effectiveness of the program than *ambivalent sexism*. Because the SDS focuses on specific attitudes concerning sexual and preventive behaviors, it is logical to consider that adherence is associated with a greater bias in the processing of information than in the case of the ASI, which relates to sexism in a more general way. In other words, those subjects with high adherence to the *sexual double standard* would, in particular, be motivated to seek coherence and to avoid dissonance (Tsang, 2017) between and within the different psychological elements (i.e., cognitive, affective, and behavioral).

Proceeding from these results, Study 2 demonstrated that introducing content oriented on prevention against sexism and sexist violence into sex education programs can influence their effectiveness.

The sessions dealing with sexism were confirmed to be effective: following the program, participants had a lower level of HS

Table 8
Analysis of the covariance of posttest/pretest differences for the low and high sexism groups

Dependent variables	Low-HS (<i>n</i> = 76)	High-HS (<i>n</i> = 94)	ANOVA			Low-BS (<i>n</i> = 92)	High-BS (<i>n</i> = 85)	ANOVA			Low-SDS (<i>n</i> = 71)	High-SDS (<i>n</i> = 74)	ANOVA			Low F2-IPDMV (<i>n</i> = 101)	High F2-IPDMV (<i>n</i> = 77)	ANOVA		
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Post-Pre			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Post-Pre			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Post-Pre			<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Post-Pre		
			<i>F</i>	<i>p</i>	<i>d</i>			<i>F</i>	<i>p</i>	<i>d</i>			<i>F</i>	<i>p</i>	<i>d</i>					
Knowledge	6.76 (7.23)	5.66 (7.95)	3.10	.080	0.27	6.43 (7.37)	5.82 (7.90)	1.46	.229	0.18	6.55 (6.94)	5.14 (7.94)	9.79	.002	0.52	5.03 (8.47)	5.91 (5.86)	1.71	.193	0.20
Benefits of condom use	0.13 (0.84)	0.29 (0.99)	.018	.892	0.00	0.14 (1.02)	0.41 (0.82)	2.34	.128	0.23	0.09 (0.97)	0.30 (0.83)	1.13	.290	0.18	0.19 (0.98)	0.32 (1.01)	0.03	.875	0.00
Costs of condom use	-0.30 (0.53)	-0.30 (0.74)	.197	.658	0.06	-0.43 (0.78)	-0.52 (0.81)	1.03	.312	0.15	-0.31 (0.64)	-0.44 (0.71)	1.04	.310	0.17	-0.47 (0.82)	-0.37 (0.77)	2.14	.145	0.22
Risk perception of UP	0.34 (3.06)	0.21 (2.54)	.031	.861	0.00	0.22 (3.13)	0.76 (2.50)	3.17	.077	0.27	0.72 (2.53)	0.72 (2.53)	4.65	.033	0.36	0.30 (2.89)	0.44 (2.83)	0.93	.336	0.14
Risk perception of AIDS	0.42 (2.42)	0.40 (2.29)	.357	.551	0.09	0.34 (2.08)	0.93 (2.08)	1.52	.219	0.19	0.13 (2.31)	0.59 (2.26)	.679	.411	0.14	0.30 (2.33)	0.75 (2.19)	1.40	.238	0.18
Perception of control	0.09 (0.65)	0.21 (0.70)	.046	.831	0.00	0.04 (0.62)	0.27 (0.78)	.898	.345	0.14	0.04 (0.64)	0.07 (0.85)	.046	.831	0.00	0.08 (0.69)	0.20 (0.66)	0.03	.875	0.00
Intention to use a condom	0.02 (0.86)	-0.14 (0.95)	2.12	.147	0.23	-0.18 (1.13)	0.06 (0.51)	2.32	.137	0.23	-0.18 (0.72)	-0.05 (0.67)	.201	.655	0.06	-0.24 (1.02)	-0.01 (0.90)	0.47	.496	0.11

Note. HS: Hostile Sexism, BS: Benevolent Sexism, SDS: Sexual Double Standard, F2-IPDMV: Acceptance of Mistreatment of Women and Legitimation of Violence as an Educational Strategy, UP: Unplanned Pregnancy.

and BS, less adherence to SDS, and fewer *distorted thoughts about the mistreatment of women and violence* (F2 IPDMV). The limited influence on F1 of the IPDMV may be due to the fact that it refers to the female role in marriage, while our sexism prevention program was adapted to the adolescent reality. Finally, it was found that when the sexism-related intervention was applied, changes concerning the SDS were limited to *knowledge and perception of risk of UP*.

When comparing the results of Studies 1 and 2, the effectiveness of the sex education intervention is found to be very similar when the influence of sexism is not taken into account (Tables 3 and 7). However, in Study 1, as regards the impacts of the program, a greater number of differences were found between the high- and low-sexism groups in the variables: *knowledge, benefits and costs of condom use, perception of control, and intention to use a condom*. The only variable in which no differences were found was *perception of risk of UP and AIDS*. By contrast, in Study 2, as regards the changes produced by intervention, which this time included training dealing with sexism, differences between the groups with high and low *sexual double standards* were reduced to only two variables. Additionally, it should be noted that the two groups were more similar to each other in the scores that they obtained in the Study 2 pretest than in the Study 1 pretest (Tables 2 and 6). In short, in both studies, following the sex education program, participants with low sexism showed more favorable scores relating to sexual prevention than those with high sexism, but in Study 2, the content dealing with sexist attitudes significantly reduced this difference in impact.

These results have some limitations. Probabilistic sampling was not carried out. Only self-report measures were used. The study design was not experimental, which might explain why in Study 2 only very limited differences were found between the high- and low-sexism groups in the pretest. In some cases, the AVE did not exceed .50, and dimension 1 of the IPDMV presented inadequate reliability indices. The intervention being, as it was, applied in a natural context, multiple external variables (for example, other educational programs targeting sexist attitudes and beliefs) were able to influence outcomes and to reduce a priori differences between people with differing levels of sexism.

In conclusion, this study is the first that we know of to provide some empirical evidence on the effectiveness of including within sex education programs specific content aimed at preventing sexism and sexist violence, for the purpose not only of increasing egalitarian attitudes, but of increasing the effectiveness of sex education programs, particularly among groups with a high level of sexism. We have confirmed the proposal made by several recent studies (Haberland & Rogow, 2015; Ramiro-Sánchez et al., 2018): that within sex education programs it is important to include interventions aimed at reducing sexism. Our results indicate that this applies in particular to the *sexual double standard*.

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