RESEARCH ARTICLE

Evaluation of the Let's Focus! (Posem el Focus) Socioeducational Intervention: Promoting Healthy and Equitable Relationships in High Schools

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─────────────── ABSTRACT ───────────────

INTRODUCTION: Gender-based violence is a worldwide problem. School-based socio-educational interventions could be effective in preventing gender-based violence. We assessed the effectiveness of the *Let's focus!* program, aimed at health and equitable interpersonal relationships among high school students.

METHODS: We conducted a quasi-experimental study in an intervention group (IG, n = 560) and a comparison group (CG, n = 366) of secondary school students in Terrassa, Spain between 2019 and 2021. Specifically, we performed an online questionnaire on sexism, acceptance of violence and machismo at baseline and after the intervention. We calculated multivariate linear regression models including satisfaction with the intervention, to evaluate the change in the variables' mean between CG and IG.

RESULTS: In comparison to the CG, in the IG hostile and benevolent sexism, and acceptance of violence decreased from baseline to after-intervention, in the group of participants highly satisfied with the intervention (42.4%); machismo did not vary. The multivariate regression analyses showed that the intervention was effective in reducing hostile sexism ($\beta = -6.40$; CI95% (-11.92; -0.88)), benevolent sexism ($\beta = -5.57$; CI95% (-10.52; -0.61)), and acceptance of violence ($\beta = -4.79$; CI95% (-9.50; -0.09)) in highly satisfied students from the IG, in comparison to the ones from the CG, regardless of their age or gender.

DISCUSSION: Let's Focus! was effective in reducing sexism and decreasing acceptance of violence among students that were highly satisfied with the intervention.

Keywords: adolescent behavior; program evaluation; health promoting schools; interpersonal relations; gender-based violence; quasi-experimental.

INTRODUCTION

Gender violence is a significant worldwide public health issue. It is associated with several adverse health outcomes, affecting physical, mental, and social well-being[1] and with detrimental health behaviors, including risky sexual practices and substance abuse.[2] Gender violence, which can occur at any stage of life, often starts during adolescence. Recent studies indicate that at the European level, at least 25.1% of girls and 19.6% of boys have been victims of gender violence.[3] In Spain, it is estimated that over half of adolescents have experienced violence within the context of romantic relationships.[3]

Gender violence is a problem inherent to patriarchal societies that primarily affects women. Furthermore, from an intersectional perspective, the impact is disproportionately greater on deprivileged people.[4] Cisheteropatriarchy is a model of social organization

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characterized by iniquities in access to rights, resources, and opportunities along various axes of power. The patriarchal power structures privilege masculinity and cisheterosexuality and deprivilege femininity and LGBTIQ+ individuals.[5] Additionally, gender intersects with other axes of power, such as social class and race,[6,7] leading to social stratification. Patriarchy is rooted in sexist behaviors and macho attitudes,[8] both acquired through socialization.[9-11]

Sexist behaviors are strongly associated with gender violence. Sexist behavior is typically defined as discriminatory actions based on values and attitudes that consider men and their attributes superior to those of women.[12] These include the legitimization and normalization of violence, as well as other sexist behaviors.[13] Due to their social acceptance, they often go unnoticed.[14] Sexism can manifest in 2 distinct forms: hostile sexism and benevolent sexism.[12] Hostile sexism refers to explicit and intentional acts of violence, targeting women who transgress the established social norms of the sex-gender system, acting as a mechanism to maintain social hierarchy and sustain a sanctioning regime.[15] Benevolent sexism is understood as protective behaviors toward women, socially perceived as signs of courtesy and respect, but ultimately demean women.[12] Both hostile and benevolent sexism reinforce the perception of women as less valid than men, serving as a justification for inequities.[14] The myths of romantic love are one of the main manifestations of sexism,[16] which can emerge early on in adolescent romantic relationships through dating violence.[17]

Sexist behaviors are determined by the social norms, values, and beliefs that underlie violence, including hegemonic masculinity. Machismo is characterized by the justification of violence and/or the reluctance to back down when facing a threat or attack to any aspect of hegemonic masculinity,[18] defending the ideals of being strong, dominant, and/or heterosexual. Macho attitudes and behaviors are expressions that sustain and reinforce this dominance. However, social norms, values, and beliefs not only affect men who share such view, but they are also enforced to girls, who normalize and internalize discriminatory gender roles, including sexual harassment and teasing because of gender atypicality or nonconformity.[19] Thus, acceptance of violence and adherence to machismo are part of these social norms, values, and beliefs, influencing gender violence and dating violence from adolescence onwards.[20]

Promoting Healthy and Equitable Relationships to relationships Relationships and Macho Attitudes

Agency is the capacity of individuals and communities to utilize available resources, own assets, and capabilities to face gender violence and promote equitable interpersonal relationships.[21] Some of the key assets include resilience, empathy, self-esteem, and effective conflict resolution.[22] In this sense, public health interventions have started to focus on positive health and on actions that individuals and communities can take to improve their health,[23] as socioeducational interventions.[24] Evaluations of these interventions have shown significant positive changes in the risk of physical, psychological, and sexual violence among both boys and girls.[25]

Formal education is linked to the production and reproduction of violence.[26] However, it can also contribute to the transformation of hegemonic relational models by promoting equity through values education based on human rights principles and critical

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analysis of gender roles, with the goal of eradicating violence against women.[27] Interventions that follow gender-transformative approaches are characterized by changing social norms, values, attitudes, and behaviors that tolerate violence.[28] These interventions are most effective in reducing the acceptability of violence, especially when they are grounded on a strong evidence-based theoretical framework[29] are multicomponent and multilevel,[30] when they address both school environments and young people.

Recently, the Lights4Violence program aimed to promote positive relationships among secondary school adolescents in 6 European countries.[31] While Lights4Violence only significantly reduced benevolent sexism in girls,[32] the results are promising.[33] The authors highlight the need to modify the intervention's content to further explore gender roles.[32,33] Additionally, Lights4Violence was implemented by teachers.[31] However, it was identified that the teachers lacked the necessary knowledge and skills to implement the program effectively.[34] Therefore, teacher training could enhance the effectiveness of Lights4Violence intervention. Furthermore, Lights4Violence is defined not from a gender-transformative approach, but from a positive youth development perspective.

In the city of Barcelona, a strategy has recently been developed to promote healthy and equitable relationships among primary and secondary school students.[35] As part of this strategy and on the basis of the Lights4Violence Project, the socioeducational intervention called *Let's focus!* (*Posem el Focus* in Catalan) was implemented. The current study aims to evaluate the effectiveness of Let's focus! among students aged 13 to 15 years in the city of Terrassa, an urban setting located in Barcelona, Spain, from 2019 to 2021. Two research questions are addressed: was the intervention effective? Does satisfaction with the intervention contribute to its effectiveness?

METHODS

Design and Study Participants

We designed a quasi-experimental study to evaluate the effectiveness of the intervention Let's focus! in an intervention group (IG), by comparing it with a comparison group (CG) not exposed to the intervention. The unit of assignment to GI or CG was the school, selected for convenience.[36] Participation in the project was offered to 4 secondary educational schools[37] in the city of Terrassa, Spain, in 2019. Of these, 2 were public schools and 2 were subsidized/private. In the public schools, most students came from socioeconomically disadvantaged backgrounds, while in the subsidized/private schools, most students came from socioeconomically advantaged backgrounds. All 4 schools agreed to participate. Each group (IG and CG) included 2 schools: 1 public school and 1 subsidized/private school. The intervention unit was the class group,[36] nested within the IG centers.

The study population consisted of 926 adolescents between 13 and 15 years of age enrolled in the 4 participating schools in the city of Terrassa, Spain, from 2019 to 2021. The unit of analysis was the individual strudents.[36] Thus, the IG comprised 560 students and CG comprised 366 students (Figure 1).

Let's focus! Intervention

The purpose of Let's Focus! is to promote healthy and equitable relationships and reduce gender inequities. Its aim is to reduce sexist behaviors and macho attitudes. The design of Let's Focus! was based on Lights4Violence program[31] and on the limitations and proposals for improvement identified by its authors.[32,33] The main innovations were 3-fold: (1) a gender-transformative approach,[28,38] (2) extensive teacher training and its evaluation,[34] and (3) a revision of the content structure and teaching techniques, incorporating more critical and dialogical methods.[38]

The resulting intervention is based on a gender-transformative, multicomponent and multilevel approach. It consisted of 8 sessions focused on developing personal, social, and emotional skills that promote healthy relationships (Table 1). Session 1 to 6 covered basic concepts related to violence, sexism, equitable relationships, and romantic love. Additionally, social skills, assertiveness, empathy, and self-esteem were addressed. Sessions 7 and 8 involved the creation of a video-capsule highlighting what characterizes healthy and equitable relationships between young people.

Let's Focus! aims to change the school environments as they reinforce social norms. For this reason, the intervention includes intense previous work with the teachers. They received 25 hours of training from the research group before the implementation. The training covered the sex-gender system, intersectionality, violence, coeducation, and equal participation. It was previously evaluated, and it shown to be successful in providing teachers with the necessary knowledge, skills, and attitudes to effectively implement the intervention.[34]

The intervention was planned for January-February 2020. However, because of the COVID-19 pandemic and subsequent lockdown measures in March 2020, the intervention was interrupted. Ultimately, it was implemented in April-June 2021 (Figure 1).

Data Collection, Variables, and Measuring Instruments

We obtained the data in 2 waves using a self-reported online questionnaire. The first wave, referred to as the baseline (W1), was conducted before the teacher's training, while the second wave (W2) took place immediately after the intervention. An

Figure 1. **Flowchart of the Matching Process in the Intervention Group (IG) and the Comparison Group (CG) of the Socioeducational Intervention** *Let's focus!* **Terrassa, Spain 2019-2021**
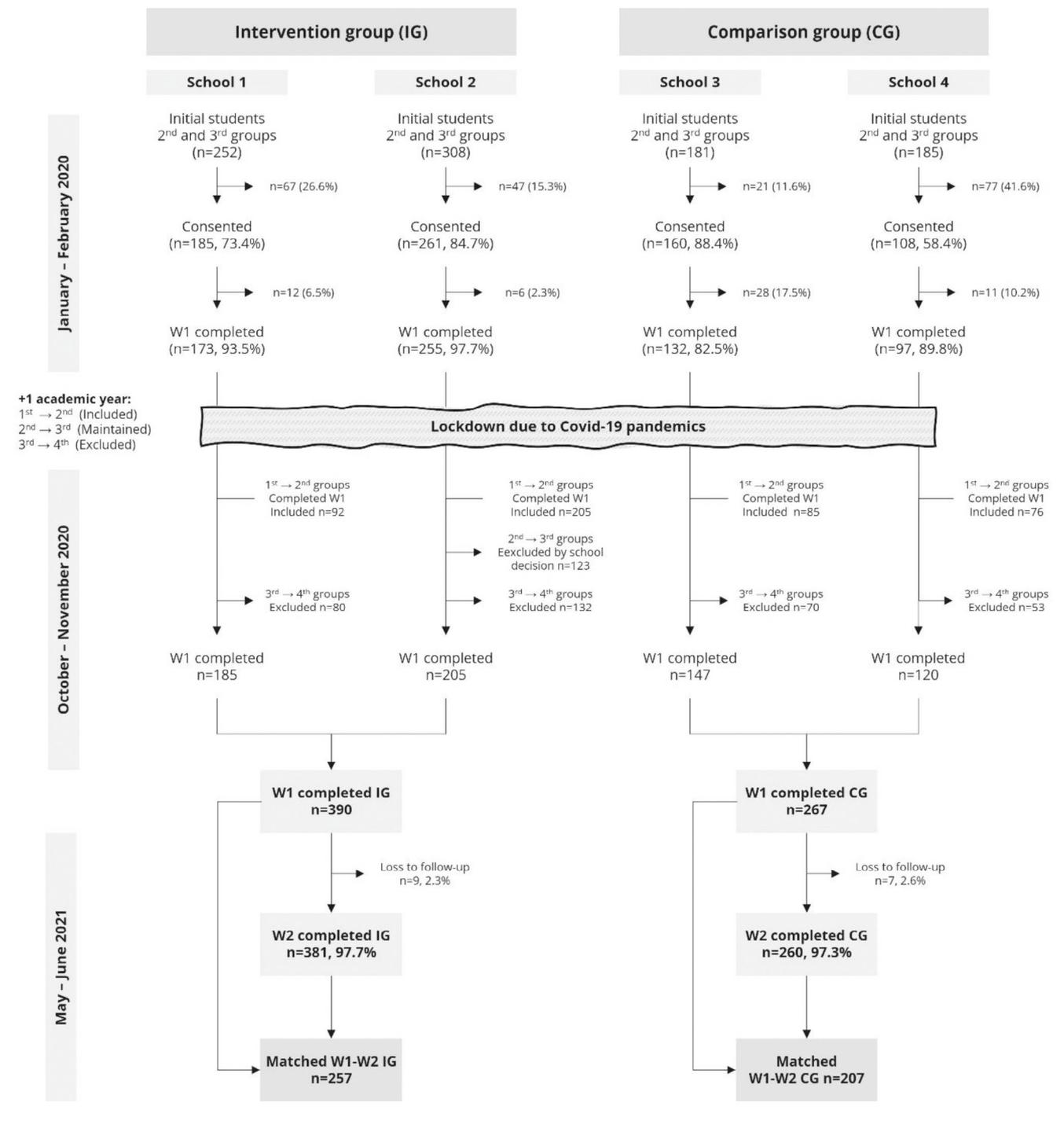
online self-administered questionnaire was realized in the absence of teachers. It was adapted from the Lights4Violence project,[31] since it included psychometric tests of high validity, reliability, and consistency for the adolescent population in Spain. Confidential alpha-numeric codes were assigned to link the W1 and W2 questionnaires.

The dependent variables were hostile sexism, benevolent sexism, acceptance of violence, and machismo. The instruments used for measurement were:

The Ambivalent Sexism Inventory (ASI)[39] is a 22-item self-reported measure of sexism, that has a high internal consistency (alpha Cronbach 0.90),

Table 1. Structure of Objectives, Contents, and Activities of the Socioeducational Intervention *Let's Focus!* to Promote Healthy and Equitable Relationships in Secondary Education, Terrassa, Spain 2019-2021

Session	Main aim	Contents	Activities
Session 1: Building positive relationships	1. Identify and transform sexist situations, attitudes, and tolerant attitudes of gender violence or violence in relationships among young people.	Basic concepts: violence, gender-based violence, sexism, intimate partner violence, gender equity, and equitable relationships.	Option A: sea and mountain + I choose violence Option B: devising together + building a positive common language
Session 2: Demystifying gender-based violence	2. Dismantle myths and irrational beliefs regarding relationships and gender violence.	Myths and beliefs in relationships.	Option A: is this fair? + group discussion Option B: myths or beliefs + group discussion
Session 3: Denaturalizing violence	3. Improve conflict management and problem-solving skills for interpersonal communication, mediation, and negotiation.	Conflict resolution and emotional management in relationships.	Option A: anger explosion + anger management Option B: anger explosion + problem-solving
Session 4: Communicating assertively and empathically	4. Defend one's own and other people's rights to prevent or confront difficult situations that may arise in romantic relationships.	Conflict resolution, assertive communication, and empathy.	Option A: communicating with style + group discussion Option B: introduction to styles + white bullets
Session 5: Putting ourselves in value	4. Defend one's own and other people's rights to prevent or confront difficult situations that may arise in romantic relationships.	Personal assets, self-esteem, assertive communication, and empathy.	Option A: positive networking + making the most of it Option B: positive networking + the sandwich technique
Session 6: Generating positive assets for conflict resolution	5. Become aware of the value of the assets within the environment to develop more equitable and healthier romantic relationships.	Assets and resources of the environment.	External assets + sharing assets
Session 7: Imagining a world of positive relationships	6. Use the factors promoting healthy and equitable relationships within the environment to create a video capsule.	Creation of a video capsule: elaboration of the argument.	Working on the story
Session 8: Creating a world of positive relationships	6. Use the factors promoting healthy and equitable relationships within the environment to create a video capsule.	Creation of a video capsule: elaboration of the script.	Option A: writing the script + let's get to work! Option B: filming . . . + . . . forum!

reliability and convergent and discriminant validity across populations and cultures, including in its Spanish version.[40] Respondents indicate their level of agreement in 22 statements on a 6-point Likert-type scale, with each item scored with a value from 0 to 5. The ASI comprises 2 sub-scales, each composed of 11 items, with a total score range of 0-55. Higher scores on the scale indicate higher levels of sexism. The hostile sexism (alpha Cronbach 0.89) sub-scale assesses an individual's position on the dimensions of dominative paternalism, competitive gender differentiation, and heterosexual hostility. The benevolent sexism (alpha Cronbach 0.86) sub-scale assesses an individual's position on the dimensions of protective paternalism, complementary gender differentiation, and heterosexual intimacy.

The Maudsley Violence Questionnaire (MVQ)[18] is a 56-item self-reported scale, that has a high internal consistency (alpha Cronbach 0.91), reliability and convergent validity in its Spanish version.[41] It measures a range of cognitive aspects related to violent attitudes: the justification of violence in response to threatened self-esteem and the legitimization of violence. Participants rate 56 statements as ''true'' or ''false.'' The MVQ comprises 2 sub-scales: machismo (42 items, score range 0-42, alpha Cronbach 0.89) and acceptance of violence (14 items, score range 0-14, alpha Cronbach 0.78). Higher scores indicate a higher level of machismo and acceptance of violence.

The study included the explicative variables and co-variables reported below.

1. Sociodemographic variables included the following: age; sex; birthplace and parents' birthplace (Spain, low-income countries, Spain with at least 1 parent born in high-income countries, Spain with at least 1 parent born in low-income countries)[42]; maternal education (low, medium, and high)[37]; and sexual orientation (heterosexual, non-heterosexual [LGB], asexual, and don't know).[43] These variables were only included in the W1 questionnaire.

2. Experiences in personal relationships included relationships with family, classmates, and teachers. We assessed exposure to cyberbullying or bullying,[44] and the presence of a romantic relationship. These variables were only included in the W1 questionnaire.

3. Co-variables related to personal assets included the following: empathy, assessed using Personal Strengths Inventory-2 (PSI-2) scale[45]; self-esteem, assessed using the Rosenberg Self-Esteem Scale (RSE)[46]; problem-solving abilities, measured using the Social Problem-Solving Inventory-Revised Scale (SPSI-RS).[47,48] These variables were included both in the W1 and W2 questionnaires, and higher final scores indicate greater personal assets.

Satisfaction with the intervention was measured through 8 questions, each scored from 0 to 10. It assessed the program's interest, usefulness, practicality, clarity as well as satisfaction with the materials, activities, explanations, and overall experience. The total score ranged from 0 to 80 and was classified in 3 categories based on the overall rating: little or not at all satisfied (score less than 40), satisfied (score between 40 and 59), and very satisfied (score was 60 or higher). Satisfaction was only included in the W2 questionnaire for the IG.

Statistical Analysis

To examine changes between W1 and W2 questionnaires in both the IG and CG, we performed a univariate analysis of the dependent variables. Additionally, to provide a description of the co-variables within the IG and CG, we conducted a univariate descriptive analysis. For the bivariate analysis, we used the statistical tests chi-squared. To visualize the distribution of dependent variables, we used boxplot graphics. We stratified these variables by pre-post intervention, as well as by sex and age, within the IG and CG. To evaluate changes from W1 to W2 in each category, paired T Student test was carried out. A chi-squared test of proportions was conducted to determine possible differences in the composition of the group of students who could be linked and those who were not linked.

To evaluate the effects of the intervention on the attitudes and behaviors measured in the questionnaires, we performed a bivariate analysis and measured the change in the response variables between W1 and W2, using the formula $\Delta x_i = x_{W2,i} - x_{W1,I}$ and we obtained the mean of increase distribution ($\Delta\mu$).

In addition, we calculated bivariate and multivariate linear regression models. A significative β_1 indicates a significant change in the mean of the dependent variable between IG and CG.[36]

The regression models used were the following:

$$Y_{i,W2} = \beta_0 + \beta_1 \cdot J_i + \beta_2 \cdot Y_{i,W1} + \delta_1 \cdot Z_{i,1} + \cdots + \delta_n \cdot Z_{i,n} + \varepsilon_i; i = 1, \ldots, N$$

where:
Y represents the values of the dependent variable in W1 and W2;
J denotes the Dummy variable ($J = 0$: CG; $J = 1$: IG);
Z corresponds to the confounding variables included in each model;
β and δ represent the model coefficients; and
ε_i represents the random error.

The modeling strategy was as follows: Model 0 (M0) was an unadjusted bivariate linear regression model without the inclusion of any confounding variable (Z_i). Models 1 to 7 (M1-7) were adjusted multivariate linear regression models with robust variance, and the residuals were analyzed to ensure the adherence to the linear regression criteria. The distinct models included different combinations of covariables: sociodemographic (M1); sociodemographic and relational experiences (M2); sociodemographic and personal assets (M3); sociodemographic, relational experiences, and personal assets (M4). Models 5 to 7 were similar to M4 with incorporation of the interaction between age and group (IG or CG) (M5), interaction between sex and group (IG or CG) (M6), and interaction with intervention satisfaction (M7).

We standardized all scales ranging from 0 to 100, adjusted age for all the analyses, and initially stratified the data by gender. However, because of the small sample size, to ensure the statistical reliability of the evaluation, this stratification was not included in the final linear regression models. To compensate for this, gender was included in multivariate models as covariable and the interaction of the dependent variable with gender was evaluated. To conduct the analyses, we used the STATA software program.

Ethical Aspects

During the study, we strictly followed the national and international ethical guidelines. Additionally, we respected the Spanish law on data confidentiality. The school staff informed the students' parents about the objectives of the study and obtained their informed collaboration consent that allowed the students to participate in the intervention. To protect all the information, we used standard procedures for data management and information storage. The study was approved by the Clinical Research Committee of the Parc de Salut Mar (CEIm-PSMAR 2019-8914-I).

RESULTS

We collected a total of 657 questionnaires in W1 and 641 questionnaires in W2. Out of these,

Table 2. Univariate Descriptive Analysis in the Categorical Variables at Baseline (W1) Before the Implementation of the Socioeducational Intervention *Let's Focus!* **Terrassa, Spain 2019-2021**

	Total		Intervention Group (IG)		Comparison Group (CG)		Statistics
	n	%	n	%	n	%	p-Value chi^2
Age							
14	315	67.9	198	77.0	117	56.5	<0.001**
15	143	30.8	55	21.4	88	42.5	
16	6	1.3	4	1.6	2	1.0	
Sex							
Boys	236	51.6	136	53.8	100	49.0	0.31
Girls	221	48.4	117	46.2	104	51.0	
Country of birth							
Spain	317	81.3	167	77.0	150	86.7	0.01**
Low-income countries	10	2.6	9	4.1	1	0.6	
Spain, but with at least 1 progenitor from low-income countries	52	13.3	37	17.1	15	8.7	
Spain, but with at least 1 progenitor from high-income countries	11	2.8	4	1.8	7	4.0	
Sexual orientation							
Heterosexual	339	73.1	187	72.8	152	73.4	0.82
Non-heterosexual (LGB)	98	21.1	54	21.0	44	21.3	
Asexual (no sexual desire)	15	3.2	10	3.9	5	2.4	
Do not know/do not answer	12	2.6	6	2.3	6	2.9	
Maternal educational level							
Low	59	15.1	40	18.7	19	10.7	0.09
Medium	132	33.8	70	32.7	62	35.0	
High	200	51.1	104	48.6	96	54.2	
Family relationships							
Very bad/bad	58	12.5	33	12.8	25	12.1	0.97
Good	208	44.8	115	44.7	93	44.9	
Very good	198	42.7	109	42.4	89	43.0	
Teachers' relationships							
Very bad/bad	89	19.2	51	19.8	38	18.4	0.86
Good	267	57.5	145	56.4	122	58.9	
Very good	108	23.3	61	23.7	47	22.7	
Classmates' relationships							
Very bad/bad	74	15.9	38	14.8	36	17.4	0.73
Good	219	47.2	124	48.2	95	45.9	
Very good	171	36.9	95	37.0	76	36.7	
Romantic relationships							
Yes	188	40.5	103	40.1	85	41.1	0.83
No	276	59.5	154	59.9	122	58.9	
Bullying or cyberbullying victim							
Yes	63	13.7	37	14.4	26	12.7	0.58
No	398	86.3	219	85.5	179	87.3	
Satisfaction with the intervention							
Little or no satisfaction with intervention			98	38.1			
Satisfied with intervention			50	19.5			
Highly satisfied with intervention			109	42.4			

*p value < 0.05, **p value < 0.01.

we established links for 464 ($n_{IG} = 257$; $n_{CG} = 207$), which formed the final dataset for analysis (Figure 1). No statistically significant differences were identified between the characteristics of the linked group and the non-linked group.

The results presented in Tables 2 and 3 include the sociodemographic characteristics of both the IG and CG, and the average values of the variables and scales for both W1 and W2. The composition of the sample did not significantly differ between the IG and CG in terms of sex, sexual orientation, maternal educational level, interpersonal relationship experiences (Table 2), and personal assets (Table 3). However, the IG had a significantly higher proportion of 14-year-olds and of participants whose parents were born in low-income countries.

Baseline Results

At W1, both the IG and CG had similar mean scores for hostile sexism and benevolent sexism,

Table 3. Univariate Descriptive Analysis and Changes in the Quantitative Variables: Self-Esteem, Empathy, Problem-Solving Ability, Benevolent Sexism, Hostile Sexism, Acceptance of Violence, and Machismo, Both at Baseline (W1) and at After the Intervention (W2) of the Socioeducational Intervention *Let's Focus!*

	Baseline (W1)									After the Intervention (W2)									Change (W2-W1)								
	Total			Intervention Group			Comparison Group			Total			Intervention Group			Comparison Group			Total			Intervention Group			Comparison Group		
	n	μ	σ	n	μ	σ	n	μ	σ	n	μ	σ	n	μ	σ	n	μ	σ	n	Δμ	σ	n	Δμ	σ	n	Δμ	σ
Dependent variables																											
Hostile sexism	568	36.5	18.7	256	36.9	21.8	312	36.2	15.7	564	32.0	25.6	255	33.4	26.6	309	30.9	24.7	452	−3.8	20.3	254	−3.5	20.9	198	−4.2	19.6
Benevolent sexism	568	35.0	17.8	256	34.9	19.6	312	35.1	16.2	564	24.5	19.4	255	26.0	19.8	309	23.2	19.0	452	−9.0	18.8	254	−8.9	18.9	198	−9.1	18.6
Violence acceptation	569	42.9	21.5	256	48.3	19.4	313	38.4	22.2	569	50.0	18.4	257	50.5	18.4	312	49.5	18.4	455	4.4	20.4	256	2.1	19.3	199	7.4	21.4
Machismo	569	19.7	14.0	256	22.3	16.1	313	17.6	11.6	569	20.0	16.2	257	21.5	17.3	312	18.8	15.2	455	−0.4	12.8	256	−0.8	13.7	199	0.2	11.6
Explicative variables																											
Self-esteem	567	59.9	15.5	256	57.9	13.0	311	61.6	17.2	559	57.2	12.3	254	57.4	11.6	305	57.0	12.9	450	−2.2	18.3	253	−0.6	18.2	197	−4.2	18.2
Empathy	567	64.4	21.8	256	62.5	22.4	311	65.8	21.2	559	66.8	23.4	254	64.6	22.9	305	68.7	23.6	450	2.7	27.3	253	2.1	28.4	197	3.6	25.9
Problem-solving ability	517	48.1	15.8	230	43.7	15.0	287	51.6	15.6	513	40.1	14.3	227	39.1	13.4	286	40.9	14.9	395	−6.4	17.9	221	−4.9	17.4	174	−8.3	18.3

μ, mean; σ, standard deviation; Δμ, mean increase from W1 to W2

while the CG had lower mean scores than the IG for acceptance of violence and machismo (Table 3). Girls obtained lower mean scores than boys for hostile sexism, benevolent sexism, acceptance of violence, and machismo (Figure 2a-d). In both groups, 15-year-olds obtained higher scores than 14-year-olds for benevolent sexism (Figure 2b) and lower scores for acceptance of violence (Figure 2c). We observed higher scores for machismo in boys from the IG whose mother had a low educational level (Figure 2d); on the contrary, we observed lower scores for acceptance of violence in girls whose mother had a low educational level than whose mother had medium or high educational level (Figure 2c).

Results After the Intervention

Table 3 shows the mean values of the dependent variables in W1 and W2, as well as the changes in mean values from W1 to W2.

In W2, hostile sexism decreased (Table 3; ΔμIG = −3.5; ΔμCG = −4.2), primarily driven by a strong decrease among girls in both the IG and CG and more specifically among those aged 15 (Figure 2a, top). However, in boys aged 14-15, hostile sexism increased in both the IG and CG from W1 to W2 (Figure 2a, top). Among boys in the IG, the increase in hostile sexism was relatively lower (though not statistically significant) in students who expressed themselves as satisfied or very satisfied with the intervention (Figure 2a, bottom). Notably, hostile sexism decreased among boys whose mothers had a high educational level in the IG, while it increased among the corresponding group in the CG (Figure 2a, center).

Benevolent sexism decreased in W2 (Table 3; ΔμIG = −8.9; ΔμCG = −9.1). The greatest decrease occurred in youth aged 15, especially among girls (Figure 2b, top). In boys aged 14, benevolent sexism decreased in W2 in the IG, and not in the CG (Figure 2b, top). Additionally, in IG we observed a decrease in benevolent sexism among boys and girls whose mothers had a low educational level (Figure 2b, center).

In W2, acceptance of violence increased in both groups, although the increase was more pronounced in the CG (Table 3; ΔμIG = +2.2; ΔμCG = +7.4). This increase was particularly prominent in both sexes at age 15, while the values remained relatively stable at age 14 (Figure 2c, top). Strikingly, acceptance of violence decreased in the IG but increased in the CG among youth whose mothers had a high educational level (Figure 2c, center).

Regarding machismo, there was little variation from W1 to W2 (Table 3; ΔμIG = −0.8; ΔμCG = +0.2). However, we observed a decrease in machismo among girls aged 14 in both the IG and CG (Figure 2d, top). Among boys, machismo decreased in the IG

Figure 2. **Box Plots Showing the Scores for Hostile Sexism (a), Benevolent Sexism (b), Acceptance of Violence (c), and Machismo (d), According to Age, Maternal Educational Level, and Satisfaction With the Intervention, From Baseline (W1) to After the Intervention (W2) of the Socioeducational Intervention** *Let's Focus!* **Terrassa, Spain 2019-2021**
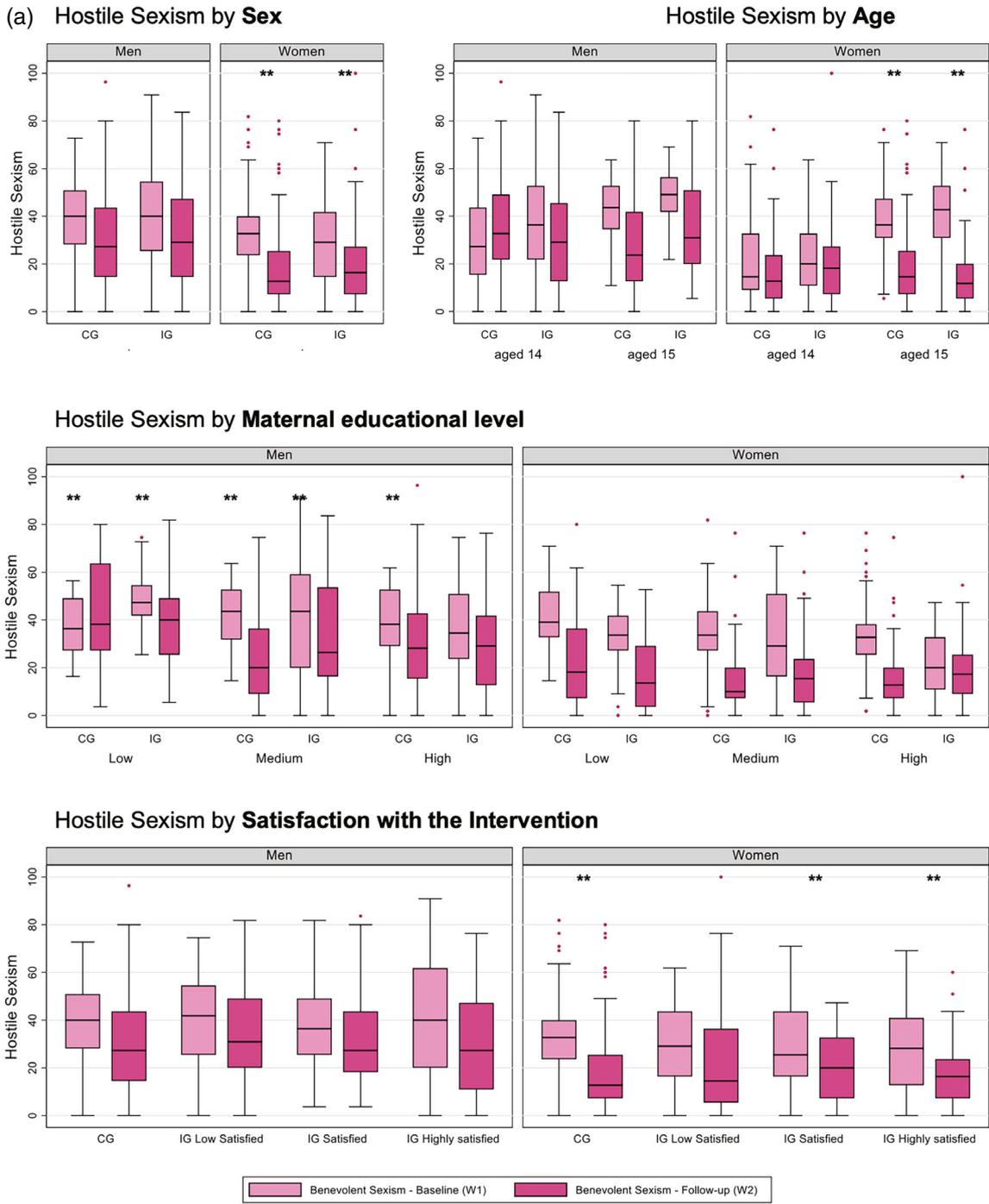
Graphs by sexo

CG: Comparison Group ; IG: Intervention Group
* Differences are statistically significant in the paired t-test (p < 0.05)
** Differences are statistically significant in the paired t-test (p < 0.01)

Figure 2. **Continued**

(b) **Benevolent Sexism by Sex**

Benevolent Sexism by Age

Benevolent Sexism by Maternal educational level

Benevolent Sexism by Satisfaction with the Intervention

CG: Comparison Group ; IG: Intervention Group
* Differences are statistically significant in the paired t-test (p < 0.05)
** Differences are statistically significant in the paired t-test (p < 0.01)

Figure 2. **Continued**

(c) Violence acceptance by **Sex**

Violence acceptance by **Age**

Violence acceptance by **Maternal educational level**

Violence acceptance by **Satisfaction with the Intervention**

CG: Comparison Group ; IG: Intervention Group
* Differences are statistically significant in the paired t-test (p < 0.05)
** Differences are statistically significant in the paired t-test (p < 0.01)

Figure 2. **Continued**

(d) **Machismo by Sex**

Machismo by Age

Machismo by Maternal educational level
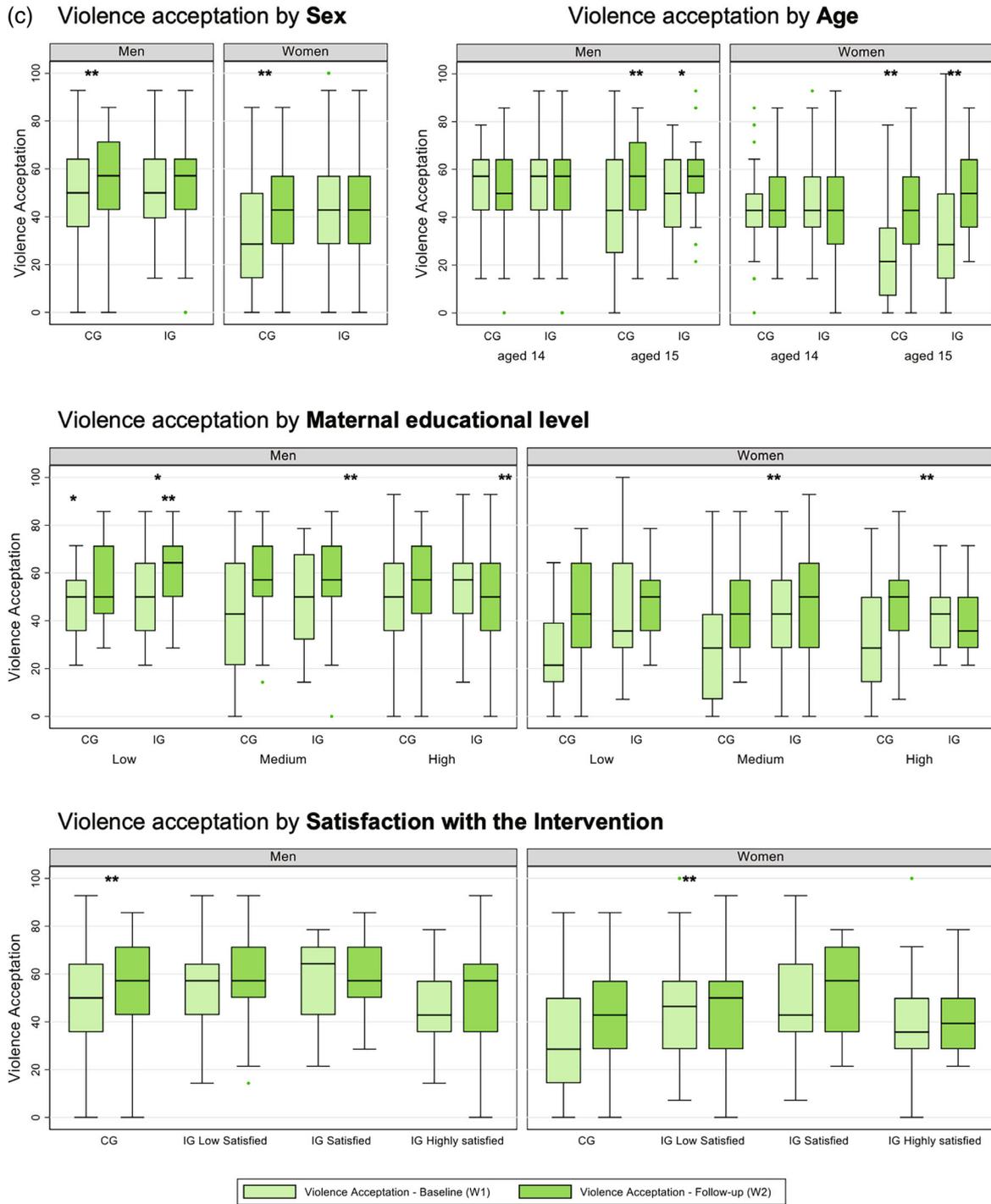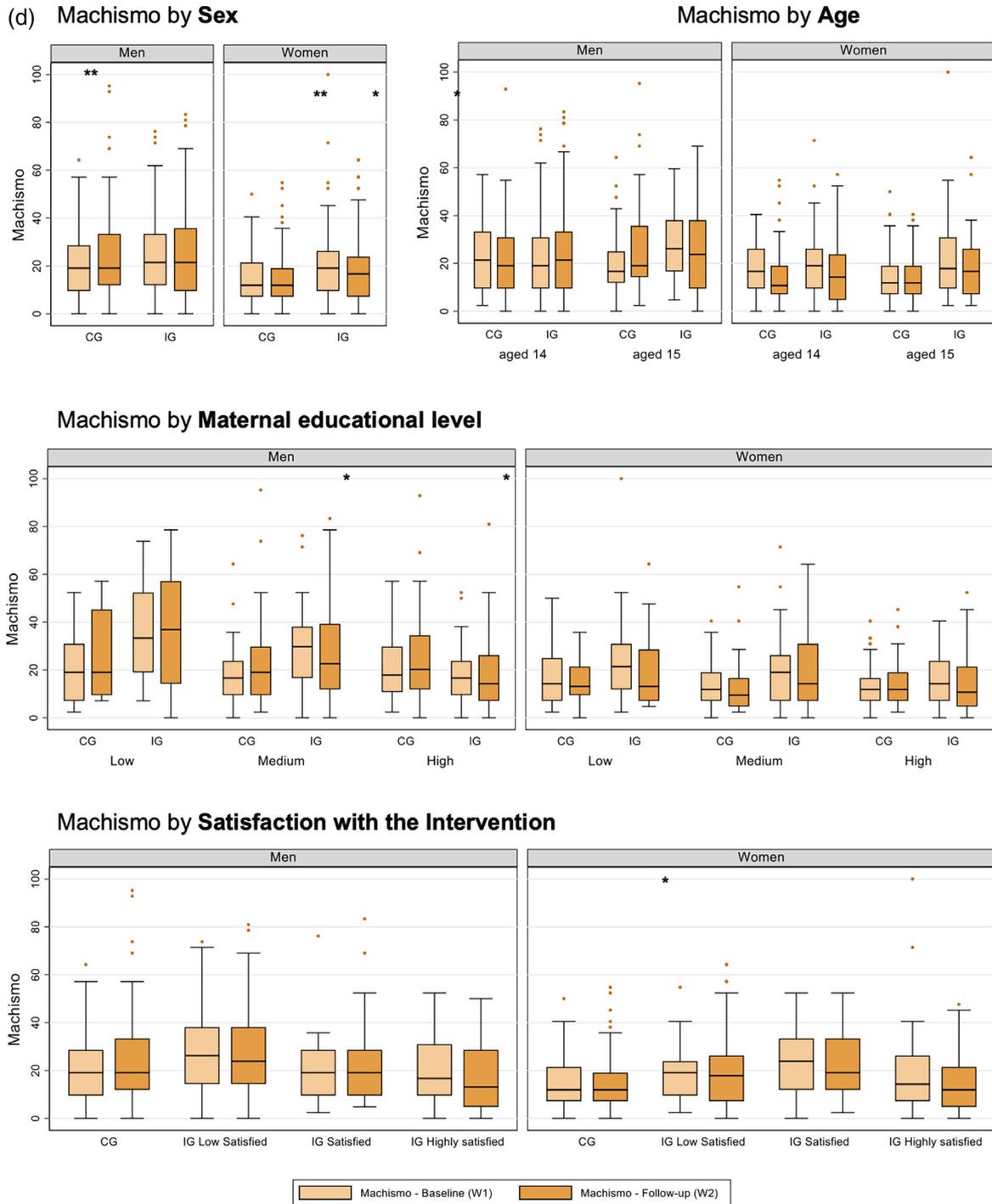
Machismo by Satisfaction with the Intervention

CG: Comparison Group ; IG: Intervention Group
 *   Differences are statistically significant in the paired t-test (p < 0.05)
 **   Differences are statistically significant in the paired t-test (p < 0.01)

in 2 sub-groups: those aged 15 (Figure 2d, top) and those whose mothers had a high educational level (Figure 2d, center). Additionally, we observed a non-significative decrease in machismo in both girls and boys in the IG who expressed themselves as highly satisfied with the intervention, while those in the CG and those in the IG who were not satisfied remained relatively stable (Figure 2d).

Most of the youth from IG were satisfied with the intervention and 50 boys (36.8%) and 56 girls (47.9%) referred to highly satisfaction with the intervention. No significant differences in satisfaction by gender or age were found.

Effectiveness of the Intervention

The intervention resulted in a significant reduction in hostile sexism ($\beta = -6.40$, 95% CI -11.92 to -0.88) among highly satisfied youths in the IG, in comparison with the ones in the CG (Table 4). In model 4, we observed no significant interactions between the IG/CG and age (Figure 3a) or sex (Figure 3b). Other variables associated with hostile sexism were identified, with girls and non-heterosexuals scoring significantly lower ($\beta = -14.8$ and $\beta = -6.96$), and youth aged 14 scoring significantly higher ($\beta = +6.51$), in comparison with their respective reference groups (Table 4).

Similarly, the intervention led to significant reduction in benevolent sexism ($\beta = -5.57$, 95% CI -10.52 to -0.61) among highly satisfied youths in the IG, in comparison with the ones in the CG (Table 5). In model 4, we observed no significant interactions between the IG/CG and age (Figure 3c) or sex (Figure 3d). However, girls scored significantly lower ($\beta = -6.71$) in benevolent sexism, while youth aged 14 scored significantly higher ($\beta = +9.50$), in comparison with their respective reference groups (Table 5).

In terms of acceptance of violence, the intervention resulted in a significant reduction among highly satisfied youths in the IG ($\beta = -4.79$, 95% CI -9.50 to -0.09), in comparison with the ones in the CG (Table 6). We observed no significant interactions between the IG/CG and age (Figure 3e) or sex (Figure 3f). Another variable was associated with acceptance of violence, with youth aged 14 scoring significantly lower ($\beta = -7.87$) than those aged 15 (Table 6). Also, there was a significantly positive association between acceptance of violence and empathy (Table 6, $\beta = +0.10$).

However, the intervention did not lead to a significant reduction in machismo among highly satisfied youths in the IG ($\beta = -2.73$, 95% CI -6.41 to $+0.94$), in comparison with the ones in the CG (Table 7).

We found no differences in intervention effectiveness regarding participants' country of origin or their maternal education level.

DISCUSSION

The Let's Focus! intervention demonstrated effectiveness in reducing hostile and benevolent sexism, as well as the acceptance of violence, among students who expressed high satisfaction with the intervention. These positive effects were observed regardless of students' gender or age. To our knowledge, few socioeducational interventions have proven effective in reducing both hostile and benevolent sexism[16,32,49,50] and acceptance of violence.[33] However, Let's Focus! was not associated with significant changes—neither improvement nor worsening—among young people who were little or not at all satisfied with the intervention, representing slightly more than half of the participants.

As evidenced by previous evaluations of health promotion programs, the implementation process plays a key role in determining the effectiveness of an intervention.[51,52] Satisfaction is an important indicator[53] and, as demonstrated in this study, it significantly influences the intervention's effectiveness. In our study, 38% of the young people were little or not at all satisfied with the intervention. The contents covered in Let's Focus! are susceptible to generating resistance, which, although undesirable, is inevitable.[54] This is particularly true among boys, as they may perceive the content as challenging hegemonic masculinity.[54] This resistance is consistent with the current context of a reactionary turn in society, especially among young people from disadvantaged socioeconomic backgrounds. Satisfaction with the intervention could be improved by enhancing its acceptability, which could, in turn, be improved with the participation of young people. Therefore, to improve effectiveness it may be essential to incorporate the perspectives of the youths throughout all phases of the design and creation of the interventions.[55] This youth participation[56] could make the interventions more attractive, interesting, useful, and appropriate for young people.[57,58]

We found that levels of sexism were consistently lower for girls and non-heterosexual individuals. A relevant finding in our study is the significant reduction of hostile and benevolent sexism among both girls and boys who were highly satisfied with the intervention, according to multivariate modeling. Previous studies had either shown a significant reduction only among girls,[32] presented overall reduction without providing sex-stratified data,[16,50] or reported a reduction in benevolent sexism but not in hostile sexism.[22,50] In patriarchal societies, individuals often benefit from conforming with gender norms, which may include sexist behaviors, depending on their identity and socialization.[14] Therefore, both hostile and benevolent sexist behaviors tend to benefit heterosexual boys the most,[39] while benevolent

Table 4. Unadjusted (Model 0), Multiple (Models 1-4), and Multiple According to Satisfaction With the Intervention (Model 7) Regression Models of Hostile Sexism, From Baseline (W1) to Follow-Up (W2) of the Socioeducational Intervention *Let's Focus!* Terrassa, Spain 2019-2021

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Comparison group (CG)	Ref	Ref	Ref	Ref	Ref	Ref
Intervention group (IG)	1.12 [−2.6 to 4.84]	−2.83 [−7.09 to 1.42]	−2.67 [−6.95 to 1.61]	−3.24 [−7.59 to 1.10]	−2.99 [−7.36 to 1.38]	Ref
IG little or no satisfaction with intervention						−0.29 [−5.92 to 5.35]
IG satisfaction with intervention						−1.30 [−8.03 to 5.43]
IG high satisfaction with intervention						−6.40 [−11.92 to −0.88]*
Age						
14	8.70 [4.65 to 12.76]**	9.60 [5.12 to 14.08]**	9.11 [4.54 to 13.68]**	7.69 [2.09 to 13.29]**	6.77 [1.06 to 12.47]*	6.51 [0.80 to 12.21]*
15	Ref	Ref	Ref	Ref	Ref	Ref
16	−6.91 [−22.96 to 9.15]	−15.38 [−35.93 to 5.16]	−14.10 [−35.07 to 6.88]	−14.00 [−34.58 to 6.58]	−11.25 [−32.26 to 9.76]	−11.99 [−33.02 to 9.05]
Sex						
Boys						1.00
Girls	−16.12 [−19.86 to −12.37]**	−15.48 [−19.99 to −10.97]**	−15.46 [−20.11 to −10.81]**	−15.71 [−20.30 to −11.11]**	−15.32 [−20.05 to −10.60]**	−14.82 [−19.57 to −10.07]**
Country of birth						
Spain	Ref	Ref	Ref	Ref	Ref	1.00
Low-income countries	−8.75 [−21.25 to 3.75]	−4.58 [−16.5 to 7.34]	−4.61 [−17.01 to 7.80]	−3.24 [−15.17 to 8.69]	−3.59 [−15.95 to 8.77]	−1.88 [−14.32 to 10.55]
Spain, but with at least 1 progenitor from low-income countries	−0.22 [−6.15 to 5.70]	1.99 [−4.20 to 8.18]	1.76 [−4.49 to 8.01]	1.00 [−5.45 to 7.45]	1.10 [−5.41 to 7.62]	2.03 [−4.52 to 8.59]
Spain, but with at least 1 progenitor from high-income countries	−6.37 [−18.22 to 5.49]	−2.89 [−14.22 to 8.44]	−2.75 [−14.22 to 8.72]	−2.43 [−13.80 to 8.94]	−2.27 [−13.76 to 9.21]	−1.92 [−13.38 to 9.54]
Sexual orientation						
Heterosexual	Ref	Ref	Ref	Ref	Ref	Ref
Non-heterosexual (LGB)	−10.11 [−14.66 to −5.57]**	−6.70 [−11.70 to −1.70]**	−7.21 [−12.43 to −2.00]**	−6.22 [−11.28 to −1.16]*	−7.04 [−12.33 to −1.74]**	−6.96 [−12.25 to −1.66]*
Asexual (no sexual desire)	−5.25 [−15.77 to 5.27]	−5.26 [−18.00 to 7.48]	−5.09 [−18.35 to 8.17]	−4.70 [−17.42 to 8.02]	−4.52 [−17.74 to 8.69]	−5.15 [−18.37 to 8.07]
Do not know/do not answer	−0.08 [−11.92 to 11.76]	3.10 [−10.59 to 16.79]	3.86 [−10.08 to 17.79]	3.98 [−9.72 to 17.69]	5.24 [−8.71 to 19.19]	5.50 [−8.44 to 19.45]
Maternal educational level						
Low	0.14 [−5.89 to 6.17]	5.47 [−0.54 to 11.47]	5.31 [−0.80 to 11.43]	7.22 [1.02 to 13.43]*	6.62 [0.30 to 12.95]*	5.96 [−0.39 to 12.3]
Medium	−3.97 [−8.47 to 0.52]	1.12 [−3.44 to 5.69]	1.04 [−3.68 to 5.76]	1.59 [−3.04 to 6.23]	1.41 [−3.38 to 6.20]	1.09 [−3.69 to 5.88]
High	Ref		Ref	Ref	Ref	Ref
Family relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	1.81 [−4.03 to 7.66]		−1.12 [−7.75 to 5.51]		−0.94 [−7.65 to 5.77]	−1.30 [−8.01 to 5.41]
Very good	6.03 [0.12 to 11.94]*		2.56 [−4.29 to 9.42]		3.44 [−3.53 to 10.41]	3.30 [−3.65 to 10.24]
Teachers' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−3.30 [−8.14 to 1.53]		−3.33 [−8.86 to 2.21]		−4.38 [−10.05 to 1.30]	−4.10 [−9.77 to 1.58]
Very good	−3.62 [−9.36 to 2.11]		−4.30 [−11.07 to 2.46]		−5.73 [−12.66 to 1.21]	−5.37 [−12.29 to 1.56]
Classmates' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	2.39 [−2.96 to 7.74]		1.12 [−5.09 to 7.32]		−0.42 [−6.75 to 5.91]	−0.12 [−6.44 to 6.21]

(Continues)

Table 4. *(Continued on next page)*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Very good	3.34 [−2.19 to 8.86]		1.06 [−7.74 to 5.61]		−1.65 [−8.43 to 5.13]	−1.07 [−7.86 to 5.71]
Romantic relationships						
Yes	Ref		Ref		Ref	Ref
No	0.79 [−4.35 to 3.25]		−0.29 [−4.73 to 4.15]		−0.62 [−5.15 to 3.92]	−0.71 [−5.23 to 3.81]
Bullying or cyberbullying victim						
Yes	Ref		Ref		Ref	Ref
No	−3.20 [−7.69 to 1.29]		0.21 [−5.09 to 5.50 Ref]		−0.32 [−5.76 to 5.11]	0.14 [−5.31 to 5.59]
Self-esteem	−0.14 [−0.28 to −0.01]*			−0.04 [−0.19 to 0.10]	−0.05 [−0.20 to 0.10]	−0.04 [−0.19 to 0.11]
Empathy	0.03 [−0.05 to 0.11]			0.09 [−0.01 to 0.19]	0.10 [−0.01 to 0.20]	0.10 [0.01 to 0.20]*
Problem-solving ability	−0.22 [−0.35 to −0.10]**			−0.06 [−0.24 to 0.11]	−0.08 [−0.25 to 0.10]	−0.07 [−0.25 to 0.10]

Note: Ref, reference category.
* *p* value < 0.05, ** *p* value < 0.01.

sexism can also offer advantages to gay or bisexual men[59] and heterosexual girls,[14] thereby reinforcing its endorsement. To enhance the decrease in sexism, it is crucial to deeply incorporate principles of intersectionality[11,27] from a critical perspective[60,61] that addresses the role of societal systems, and the impact of violence in shaping the relational patterns.[10] This approach expands our perspective beyond a binary approach and includes affective, sexual, and gender diversity within the intervention.[59]

Consistent with previous studies, we found that levels of acceptance of violence and machismo were lower among girls than among boys,[31] and these levels were reduced after the intervention among highly satisfied participants. Few other socioeducational interventions have demonstrated effectiveness in reducing acceptance of violence.[30] Reducing acceptance of violence and machismo may present greater challenges than reducing sexism. One of the main difficulties lies in modifying social norms and the attitudes that reinforce them. Gender-transformative approaches are effective in this task because they address structural factors,[38] which are crucial for ensuring effective interventions with boys.[62]

Reducing sexist and macho behavior among boys is a priority.[20] Promising approaches include engaging men in interventions[54] recognizing diversity among men; dismantling stereotypes; developing skills to identify sexist behaviors; and highlighting the role of societal systems in perpetrating and reproducing sexist/macho behaviors.[63]

IMPLICATIONS FOR SCHOOL HEALTH

Interventions to promote healthy and equitable relationships can contribute to reducing gender iniquities. Critical pedagogies can be useful in helping to change the social norms that underpin asymmetrical relational patterns.[38] School environments themselves should promote the transformation of relational models. Action must be taken on the hidden curriculum, which consists of the implicit and often non-intentional lessons, values, and perspectives that students learn in formal education settings, in addition to the formal curriculum.[64] Also, the physical and symbolic space and forms of school organization,[65] since they contribute to reinforcing the school's social norms.

This intervention was implemented by previously trained teachers. However, it is important to acknowledge that teachers, like any individuals, may have gender stereotypes that can indirectly shape the students' beliefs.[66] Therefore, effective teacher training, that challenges the norms and beliefs supporting gender-based violence, might be key for more efficient interventions to reduce both sexism and gender-based violence.

Table 5. Unadjusted (Model 0), Multiple (Models 1-4) and Multiple According to Satisfaction With the Intervention (Model 7) Regression Models of Benevolent Sexism, From Baseline (W1) to Follow-Up (W2) of the Socioeducational Intervention *Let's Focus!*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Comparison group (CG)	Ref	Ref	Ref	Ref	Ref	Ref
Intervention group (IG)	1.45 [−1.66 to 4.55]	−1.58 [−5.37 to 2.21]	−1.51 [−5.3 to 2.29]	−1.47 [−5.4 to 2.45]	−1.33 [−5.27 to 2.61]	
IG little or no satisfaction with intervention						2.25 [−2.73 to 7.24]
IG satisfaction with intervention						0.07 [−5.97 to 6.12]
IG high satisfaction with intervention						−5.57 [−10.52 to −0.61]*
Age						
14	11.17 [7.66 to 14.68]**	11.74 [7.48 to 15.99]**	11.15 [6.84 to 15.46]**	10.47 [5.26 to 15.69]**	9.61 [4.31 to 14.90]**	9.50 [4.24 to 14.77]**
15	Ref	Ref	Ref	Ref	1.0	Ref
16	4.25 [−8.86 to 17.36]	0.95 [−17.28 to 19.18]	2.35 [−16.18 to 20.88]	1.53 [−17.02 to 20.08]	3.85 [−15.08 to 22.78]	2.70 [−16.13 to 21.53]
Sex						
Boys	Ref	Ref	Ref	Ref	Ref	Ref
Girls	−8.35 [−11.47 to −5.23]**	−7.62 [−11.46 to −3.77]**	−7.57 [−11.53 to −3.62]**	−7.95 [−11.91 to −3.98]**	−7.55 [−11.65 to −3.46]**	−6.71 [−10.82 to −2.60]**
Country of birth						
Spain	Ref	Ref	Ref	Ref	Ref	Ref
Low-income countries	2.19 [−8.38 to 12.76]	3.45 [−7.10 to 14.00]	1.95 [−8.97 to 12.88]	3.44 [−7.29 to 14.16]	2.25 [−8.86 to 13.36]	4.18 [−6.90 to 15.27]
Spain, but with at least 1 progenitor from low-income countries	0.19 [−4.86 to 5.24]	1.33 [−4.16 to 6.83]	1.02 [−4.50 to 6.55]	1.48 [−4.33 to 7.29]	1.43 [−4.43 to 7.30]	2.50 [−3.35 to 8.36]
Spain, but with at least 1 progenitor from high-income countries	−3.44 [−13.50 to 6.62]	−1.10 [−11.14 to 8.94]	−1.24 [−11.36 to 8.89]	−1.56 [−11.81 to 8.69]	−1.56 [−11.91 to 8.79]	−1.25 [−11.51 to 9.00]
Sexual orientation						
Heterosexual	Ref	Ref	Ref	Ref	Ref	Ref
Non-heterosexual (LGB)	−4.67 [−8.50 to −0.85]*	−2.06 [−6.52 to 2.40]	−3.22 [−7.83 to 1.40]	−1.24 [−5.85 to 3.38]	−2.45 [−7.27 to 2.36]	−2.20 [−6.98 to 2.59]
Asexual (no sexual desire)	1.39 [−7.50 to 10.29]	−0.19 [−11.49 to 11.11]	−0.66 [−12.38 to 11.05]	−0.11 [−11.58 to 11.36]	−0.61 [−12.52 to 11.30]	−1.23 [−13.06 to 10.6]
Do not know/do not answer	1.13 [−8.86 to 11.11]	−4.21 [−16.36 to 7.94]	−3.83 [−16.16 to 8.49]	−2.77 [−15.14 to 9.61]	−2.19 [−14.81 to 10.42]	−1.85 [−14.37 to 10.66]
Maternal educational level						
Low	−0.89 [−5.91 to 4.14]	1.12 [−4.20 to 6.44]	0.46 [−4.94 to 5.85]	1.72 [−3.87 to 7.32]	0.81 [−4.90 to 6.53]	−0.14 [−5.83 to 5.56]
Medium	−2.72 [−6.47 to 1.02]	0.35 [−3.70 to 4.39]	−0.32 [−4.49 to 3.84]	0.76 [−3.41 to 4.93]	0.11 [−4.21 to 4.42]	−0.37 [−4.65 to 3.91]
High	Ref	Ref	Ref	Ref	Ref	Ref
Family relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−1.60 [−6.48 to 3.28]		−2.75 [−8.61 to 3.12]		−2.73 [−8.78 to 3.32]	−3.13 [−9.14 to 2.88]
Very good	2.31 [−2.61 to 7.24]		0.95 [−5.10 to 7.01]		1.33 [−4.94 to 7.60]	1.07 [−5.15 to 7.28]
Teachers' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−2.69 [−6.71 to 1.34]		−3.24 [−8.09 to 1.62]		−3.23 [−8.31 to 1.85]	−2.72 [−7.77 to 2.34]
Very good	−2.90 [−7.63 to 1.84]		−2.71 [−8.57 to 3.15]		−3.17 [−9.31 to 2.97]	−2.45 [−8.56 to 3.66]

(Continues)

Table 5. *(Continued on next page)*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Classmates' relationships						
Very bad/bad			Ref		Ref	Ref
Good	−0.78 [−5.25 to 3.68]		−1.22 [−6.69 to 4.25]		−1.46 [−7.16 to 4.24]	−1.00 [−6.66 to 4.66]
Very good	−1.07 [−5.67 to 3.54]		−3.15 [−9.03 to 2.73]		−2.85 [−8.95 to 3.25]	−2.02 [−8.09 to 4.06]
Romantic relationships						
Yes	Ref		Ref		Ref	Ref
No	−1.11 [−4.26 to 2.04]		−1.65 [−5.57 to 2.28]		−1.26 [−5.35 to 2.82]	−1.35 [−5.39 to 2.70]
Bullying or cyberbullying victim						
Yes	Ref		Ref		Ref	Ref
No	−1.23 [−4.98 to 2.52]		1.03 [−3.64 to 5.70]		0.69 [−4.21 to 5.59]	1.15 [−3.73 to 6.02]
Self-esteem	−0.13 [−0.24 to −0.02]*			−0.06 [−0.19 to 0.07]	−0.05 [−0.19 to 0.08]	−0.04 [−0.18 to 0.09]
Empathy	−0.04 [−0.11 to 0.03]			0.00 [−0.09 to 0.09]	0.01 [−0.08 to 0.10]	0.02 [−0.07 to 0.11]
Problem-solving ability	−0.24 [−0.35 to −0.13]**			−0.07 [−0.22 to 0.09]	−0.08 [−0.23 to 0.08]	−0.08 [−0.23 to 0.08]

Note: Ref, reference category.
* p value < 0.05, ** p value < 0.01.

Table 6. Unadjusted (Model 0), Multiple (Models 1-4) and Multiple According to Satisfaction With the Intervention (Model 7) Regression Models of Acceptance of Violence, From Baseline (W1) to Follow-Up (W2) of the Socioeducational Intervention *Let's Focus!*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Comparison group (CG)	Ref	Ref	Ref	Ref	Ref	Ref
Intervention group (IG)	−1.81 [−4.89 to 1.26]	−1.54 [−5.20 to 2.13]	−1.42 [−5.10 to 2.25]	−1.17 [−4.90 to 2.57]	−1.06 [−4.80 to 2.69]	
IG little or no satisfaction with intervention						1.83 [−2.95 to 6.62]
IG satisfaction with intervention						0.95 [−4.83 to 6.74]
IG high satisfaction with intervention						−4.79 [−9.50 to −0.09]*
Age						
14	Ref	Ref	Ref	Ref	Ref	Ref
15	−6.79 [−10.25 to −3.33]**	−6.86 [−10.84 to −2.89]**	−6.74 [−10.79 to −2.70]**	−7.76 [−12.75 to −2.76]**	−8.01 [−13.08 to −2.94]**	−7.87 [−12.92 to −2.83]**
16	−3.44 [−16.71 to 9.83]	−3.33 [−21.06 to 14.39]	−2.03 [−20.06 to 16.01]	−1.88 [−19.62 to 15.86]	−0.34 [−18.43 to 17.74]	−1.01 [−19.03 to 17.02]
Sex						
Boys	Ref	Ref	Re	Ref	Ref	Ref
Girls	−4.86 [−7.97 to −1.76]**	−4.44 [−8.17 to −0.71]*	−4.43 [−8.25 to −0.61]*	−4.38 [−8.20 to −0.56]*	−4.11 [−8.12 to −0.10]*	−3.66 [−7.57 to 0.26]
Country of birth						
Spain	Ref	Ref	Ref	Ref	Ref	Ref
Low-income countries	−6.72 [−16.65 to 3.21]	−8.81 [−19.06 to 1.44]	−9.05 [−19.67 to 1.57]	−7.75 [−18.00 to 2.51]	−8.60 [−19.20 to 1.99]	−6.96 [−17.55 to 3.63]
Spain, but with at least 1 progenitor from low-income countries	−0.36 [−5.09 to 4.36]	−0.90 [−6.25 to 4.44]	−1.10 [−6.47 to 4.96]	−0.60 [−6.17 to 4.96]	−0.55 [−6.15 to 5.06]	0.31 [−5.29 to 5.91]
Spain, but with at least 1 progenitor from high-income countries	5.96 [−3.47 to 15.39]	5.19 [−4.57 to 14.95]	4.85 [−5.00 to 14.69]	6.10 [−3.69 to 15.90]	6.02 [−3.86 to 15.89]	6.37 [−3.44 to 16.18]
Sexual orientation						
Heterosexual	Ref	Ref	Ref	Ref	Ref	Ref
Non-heterosexual (LGB)	−0.16 [−3.90 to 3.58]	−0.66 [−4.96 to 3.64]	−1.58 [−6.03 to 2.88]	−0.50 [−4.84 to 3.85]	−1.71 [−6.24 to 2.82]	−1.62 [−6.13 to 2.89]
Asexual (no sexual desire)	−7.16 [−15.97 to 1.65]	−6.24 [−17.23 to 4.75]	−5.55 [−16.94 to 5.85]	−6.55 [−17.52 to 4.42]	−5.41 [−16.78 to 5.96]	−6.06 [−17.38 to 5.26]
Do not know/do not answer	−1.64 [−11.54 to 8.26]	−2.24 [−14.05 to 9.57]	−0.69 [−12.66 to 11.28]	−2.74 [−14.55 to 9.08]	−1.02 [−13.02 to 10.98]	−0.73 [−12.66 to 11.21]
Maternal educational level						
Low	5.34 [0.47 to 10.21]*	7.57 [2.37 to 12.77]*	7.48 [2.22 to 12.73]*	6.58 [1.20 to 11.96]*	6.04 [0.58 to 11.50]*	5.34 [−0.11 to 10.78]
Medium	3.10 [−0.54 to 6.74]	3.07 [−0.85 to 7.00]	2.91 [−1.14 to 6.96]	2.25 [−1.73 to 6.23]	1.80 [−2.30 to 5.91]	1.35 [−2.74 to 5.44]
High	Ref	Ref	Ref	Ref	Ref	Ref
Family relationships						
Very bad/bad	Ref			Ref	Ref	Ref
Good	−1.03 [−5.88 to 3.81]			−2.48 [−8.20 to 3.23]	−3.89 [−9.68 to 1.90]	−4.36 [−10.12 to 1.40]
Very good	−0.54 [−5.41 to 4.32]			−0.78 [−6.67 to 5.11]	−2.09 [−8.07 to 3.90]	−2.30 [−8.23 to 3.64]
Teachers' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−0.85 [−4.78 to 3.07]		−3.24 [−7.93 to 1.45]		−3.40 [−8.22 to 1.43]	−3.11 [−7.92 to 1.69]
Very good	−6.38 [−11.06 to −1.70]**		−6.28 [−12.01 to −0.55]*		−5.72 [−11.60 to 0.17]	−5.37 [−11.23 to 0.49]

Table 6. *(Continued on next page)*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Classmates' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−0.09 [−4.49 to 4.32]		0.09 [−5.23 to 5.42]		−0.07 [−5.51 to 5.37]	0.28 [−5.13 to 5.70]
Very good	−0.60 [−5.15 to 3.95]		−1.14 [−6.86 to 4.58]		−1.23 [−7.05 to 4.59]	−0.54 [−6.35 to 5.26]
Romantic relationships						
Yes	Ref		Ref		Ref	Ref
No	−0.83 [−3.95 to 2.29]		−0.77 [−4.65 to 3.10]		−1.36 [−5.31 to 2.59]	−1.64 [−5.57 to 2.28]
Bullying or cyberbullying victim						
Yes	Ref		Ref		Ref	Ref
No	−1.74 [−5.43 to 1.95]		0.09 [−4.44 to 4.62]		−0.98 [−5.64 to 3.68]	−0.54 [−5.18 to 4.11]
Self-esteem	0.07 [−0.04 to 0.18]			−0.03 [−0.15 to 0.1]	−0.02 [−0.15 to 0.1]	−0.02 [−0.15 to 0.11]
Empathy	0.06 [−0.01 to 0.13]			0.08 [−0.01 to 0.17]	0.10 [0.01 to 0.18]*	0.10 [0.02 to 0.19]*
Problem-solving ability	0.18 [0.08 to 0.28]**			0.02 [−0.13 to 0.17]	0.01 [−0.14 to 0.16]	0.01 [−0.14 to 0.16]

Note: Ref, reference category.
* *p* value < 0.05, ** *p* value < 0.01.

Table 7. Unadjusted (Model 0), Multiple (Models 1-4) and Multiple According to Satisfaction With the Intervention (Model 7) Regression Models of Machismo, From Baseline (W1) to Follow-Up (W2) of the Socioeducational Intervention *Let's Focus!*

|	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Comparison group (CG)	Ref	Ref	Ref	Ref	Ref	Ref
Intervention group (IG)	−0.08 [−2.39 to 2.23]	0.75 [−2.09 to 3.60]	0.75 [−2.06 to 3.57]	0.37 [−2.59 to 3.34]	0.39 [−2.55 to 3.33]	
IG little or no satisfaction with intervention						3.06 [−0.68 to 6.79]
IG satisfaction with intervention						1.64 [−2.88 to 6.16]
IG high satisfaction with intervention						−2.73 [−6.41 to 0.94]
Age						
14	−0.68 [−3.20 to 1.85]	−2.10 [−5.05 to 0.84]	−2.29 [−5.24 to 0.66]	−1.22 [−5.02 to 2.57]	−1.93 [−5.74 to 1.87]	−1.98 [−5.76 to 1.80]
15	Ref	ÇRef	Ref	Ref	Ref	Ref
16	9.82 [−0.27 to 19.92]	19.23 [5.50 to 32.97]**	18.37 [4.56 to 32.18]**	18.82 [4.76 to 32.87]**	18.70 [4.55 to 32.86]**	17.85 [3.77 to 31.93]*
Sex						
Boys	Ref	Ref	Ref	Ref	Ref	Ref
Girls	−3.32 [−5.55 to −1.09]**	−3.46 [−6.32 to −0.59]*	−3.67 [−6.59 to −0.75]*	−3.34 [−6.33 to −0.34]*	−3.37 [−6.42 to −0.31]*	−2.86 [−5.91 to 0.19]
Country of birth						
Spain	Ref	Ref	Ref	Ref	Ref	Ref
Low-income countries	7.49 [−0.23 to 15.21]	8.29 [0.34 to 16.24]	5.42 [−2.72 to 13.56]	8.00 [−0.13 to 16.13]	5.31 [−2.99 to 13.61]	6.76 [−1.52 to 15.05]
Spain, but with at least 1 progenitor from low-income countries	−2.34 [−6.02 to 1.35]	−1.20 [−5.35 to 2.94]	−1.01 [−5.13 to 3.11]	−2.19 [−6.60 to 2.22]	−1.71 [−6.10 to 2.68]	−0.87 [−5.26 to 3.52]
Spain, but with at least 1 progenitor from high-income countries	−1.87 [−9.18 to 5.44]	−0.91 [−8.47 to 6.66]	−0.90 [−8.45 to 6.65]	−1.52 [−9.29 to 6.26]	−1.28 [−9.03 to 6.47]	−1.11 [−8.78 to 6.57]
Sexual orientation						
Heterosexual	Ref	Ref	Ref	1.0	Ref	Ref
Non-heterosexual (LGB)	−0.79 [−3.60 to 2.02]	1.05 [−2.28 to 4.38]	0.04 [−3.38 to 3.45]	0.97 [−2.48 to 4.41]	−0.26 [−3.82 to 3.29]	−0.15 [−3.68 to 3.38]
Asexual (no sexual desire)	−4.63 [−11.28 to 2.03]	−0.83 [−9.36 to 7.69]	1.58 [−7.16 to 10.32]	−1.03 [−9.73 to 7.66]	1.34 [−7.57 to 10.25]	0.94 [−7.91 to 9.79]
Do not know/do not answer	1.41 [−6.05 to 8.86]	2.89 [−6.25 to 12.02]	4.12 [−5.05 to 13.29]	2.74 [−6.60 to 12.09]	4.12 [−5.27 to 13.52]	4.31 [−5.01 to 13.64]
Maternal educational level						
Low	−0.09 [−3.99 to 3.81]	0.50 [−3.58 to 4.59]	−0.13 [−4.23 to 3.96]	0.59 [−3.74 to 4.92]	−0.33 [−4.69 to 4.02]	−0.89 [−5.22 to 3.44]
Medium	−1.52 [−4.38 to 1.35]	−0.57 [−3.63 to 2.5]	−1.33 [−4.44 to 1.79]	−0.58 [−3.76 to 2.6]	−1.49 [−4.73 to 1.75]	−1.79 [−5.0 to 1.43]
High	Ref	Ref	Ref	Ref	Ref	Ref
Family relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−2.54 [−6.18 to 1.10]		−3.98 [−8.35 to 0.38]		−4.44 [−8.96 to 0.08]	−4.74 [−9.23 to −0.25]*
Very good	−2.57 [−6.22 to 1.09]		−2.78 [−7.3 to 1.73]		−2.97 [−7.66 to 1.71]	−3.17 [−7.81 to 1.47]
Teachers' relationships						
Very bad/bad	Ref		Ref		Ref	Ref
Good	−3.67 [−6.64 to −0.70]*		−2.20 [−5.82 to 1.42]		−2.50 [−6.31 to 1.30]	−2.28 [−6.06 to 1.50]
Very good	−4.44 [−7.98 to −0.91]*		−1.59 [−5.99 to 2.81]		−2.07 [−6.68 to 2.55]	−1.71 [−6.3 to 2.87]
Classmates' relationships						
Very bad/bad	Ref		Ref		Ref	1.00
Good	0.24 [−3.09 to 3.56]		0.11 [−3.97 to 4.19]		0.03 [−4.23 to 4.29]	0.36 [−3.87 to 4.59]
Very good	−0.50 [−3.96 to 2.96]		−1.77 [−6.16 to 2.62]		−1.87 [−6.44 to 2.69]	−1.33 [−5.87 to 3.21]
Romantic relationships						

(Continues)

Table 7. *(Continued on next page)*

	Model 0 β [95% CI]	Model 1 β [95% CI]	Model 2 β [95% CI]	Model 3 β [95% CI]	Model 4 β [95% CI]	Model 7 β [95% CI]
Yes	Ref				1.00	1.00
No	−3.77 [−6.10 to −1.44]**		−3.76 [−6.69 to −0.83]*		−3.74 [−6.80 to −0.68]*	−3.91 [−6.94 to −0.87]*
Bullying or cyberbullying victim						
Yes	Ref		Ref		Ref	Ref
No	−2.17 [−4.95 to 0.61]		−2.86 [−6.34 to 0.63]		−2.97 [−6.63 to 0.69]	−2.60 [−6.24 to 1.05]
Self-esteem	−0.03 [−0.11 to 0.06]			−0.03 [−0.13 to 0.07]	−0.03 [−0.13 to 0.07]	−0.03 [−0.13 to 0.07]
Empathy	−0.01 [−0.06 to 0.05]			−0.02 [−0.08 to 0.05]	0.00 [−0.07 to 0.07]	0.01 [−0.06 to 0.07]
Problem-solving ability	0.06 [−0.02 to 0.14]			0.05 [−0.07 to 0.17]	0.03 [−0.09 to 0.15]	0.03 [−0.08 to 0.15]

Note: Ref, reference category.
* p value < 0.05, ** p value < 0.01.

Figure 3. **Graphs Illustrating the Significance of Interactions Between Comparison Group (CG) and Intervention Group (IG) and Age or Sex in Linear Regressions (Model 5 and 6) for the Dependent Variables: Hostile Sexism (a: age, b: sex); Benevolent Sexism (c: age, d: sex); Acceptance of Violence (e: age, f: sex); and Machismo (g: age, h: sex), From Baseline (W1) to After the Intervention (W2) of the Socioeducational Intervention** *Let's Focus!* **Terrassa, Spain 2019-2021**
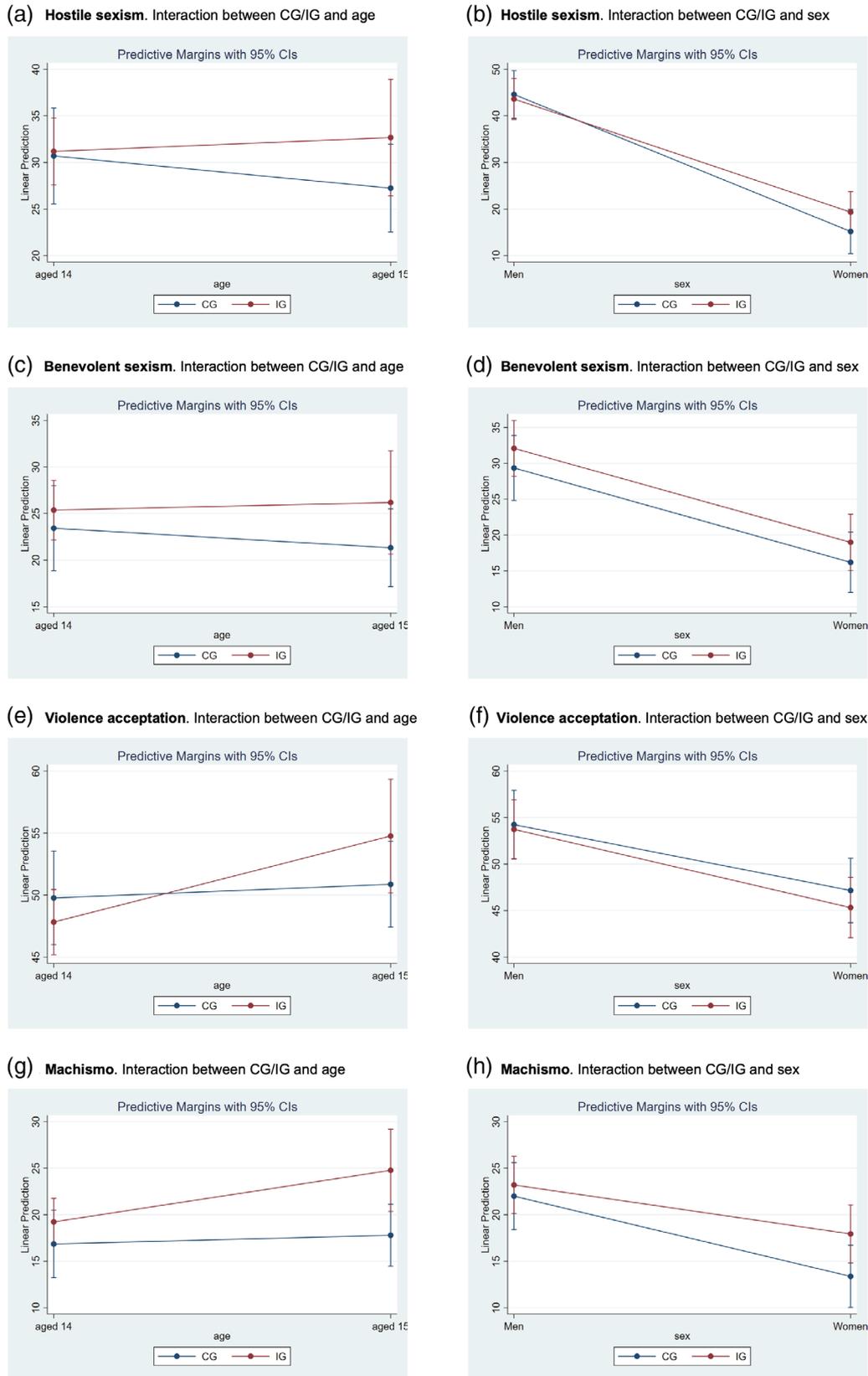
Finally, comprehensive socioeducational interventions promoting healthy and equitable relationships could be included as compulsory into the schools' curriculum, integrated with sex-affective education programs.[67] Thus, this approach might reinforce and enhance health assets[23] and positive youth development.[68]

Strengths and Limitations

This study does not include follow-up over time (W3), which represents the main limitation. This has not been possible mainly because of the reduction in the size of our sample, partly due to the confinement measures following the COVID-19 pandemic. This reduction might limit the statistical power of the study; however, it was sufficient to draw conclusions about the overall effects of the intervention. To evaluate the durability of the impact of the intervention over time has not been possible either.

In addition, the responses to the questionnaire could have been affected by social desirability bias, although self-referenced questionnaires are the best option to avoid this bias. There could also be bias due to the comprehension of the questionnaire. Nevertheless, the results were analyzed considering several factors, such as gender, age, and other axes of power, thus ensuring that the intervention was effective despite the social position of the participants.

Because the effect of socioeducational interventions often varies by gender, it is crucial to stratify the analysis by gender. However, due to the small sample size, gender-stratified analyses could not be conducted. Nevertheless, in the descriptive analyses, no significant differences were observed by sex, and interactions in multivariate analyses were not significant.

A major strength of the present study is the use of a quasi-experimental design to evaluate this socioeducational intervention. Therefore, school groups were not randomly assigned, but rather selected based on convenience. It is possible that factors at the center level, such as greater teacher motivation with Let's Focus! contents, may have influenced participation. It should be noted that while scales with high internal consistency were used to measure change, the psychometric tests employed in the assessment may not be sensitive enough to detect small changes in knowledge, skills, and attitudes.

Conclusion

The socioeducational intervention Let's Focus! has proven effective in reducing sexism and acceptance of violence among adolescents, regardless of gender, among those who express high satisfaction with the intervention. However, the intervention did not lead to significant changes among youths who reported little or no satisfaction. Several factors have contributed

to the intervention's effectiveness: including prior teacher training, a theoretical framework based on transformative gender approach, promotion of personal and environmental assets, and use of critical and dialogical methods. Moving forward, continuous efforts are crucial to reduce sexism and machismo among young people. Key strategies to enhance the effectiveness of interventions aimed at preventing gender violence include addressing the social norms and beliefs that produce and reproduce violence, providing ongoing teacher training, increasing youth participation, influencing structural elements within schools, and implementing interventions that promote healthy and equitable relationships across all stages of people's lives.

AUTHOR CONTRIBUTIONS

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