



# Teachers dealing with non-conformity: Development of the attitudes toward childhood gender identity questionnaire for educational settings

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## ABSTRACT

Valid and reliable measures to evaluate teachers' attitudes towards transgender and gender nonconforming students are lacking. Therefore, we developed the *Attitudes toward Childhood Gender Identity Questionnaire for Teachers* (ACGIQ-T). We analyzed data from 358 Spanish teachers (84.5% women). A CFA supported a 13-item version of the questionnaire with three factors (71% of the variance explained): Cross-gender roles in leisure/friendship; Cross-gender-typical behaviors and Cross-gender feelings/expressions. Cronbach's alpha values were over 0.82. Regarding concurrent validity, women and feminine individuals were more likely to approve cross-gender behaviors. Associations of ACGIQ-T factors with other non-conformity roles were found, and the perception of cross-gender behaviors as problematic was associated with willingness to facilitate transitions of children and adolescents. Implications for the educational field are discussed.

## 1. Introduction

### 1.1. Gender identity construction

Transgender girls and boys are clearly aware of their gender identity from a very early stage, although this may complicate their socialization process as they encounter very strong pressures from people in their immediate social environment (Gavilán, 2018; Mayor, 2020). Gender identity is usually established at the age of 2–4 years (Gómez-Gil, Esteva & Fernández-Tresguerres, 2006) and, according to the classical 's' theory of Piaget and Kohlberg, gender constancy, one's understanding that sex remains the same, or constant, across time and situations (Ruble et al., 2007) is fulfilled at the age of 6–7 years. Nevertheless, there is a general assumption that adolescence is a crucial period for gender identity consolidation (prior to or after puberty) (Steensma, McGuire, Kreukels, Beekman & Cohen-Kettenis, 2013). This is probably influenced by a biomedical viewpoint of medicine and hormonal treatments, where the subject of transgender transition tends to be approached at around the time of puberty (or later, such as 16 years old) (Abramowitz, 2018; Kaltiala-Heino, Bergman, Työlajärvi & Frisé, 2018). However, when gender transition occurs before puberty, that is, when children are recognized as boys or girls regardless of their genital sex, their psychological functioning and social well-being improve considerably, and distress is reduced (Ehrensaft et al., 2017).

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Some research on gender roles and gender identity in childhood indicates that identification with the roles attributed to the other sex is not an unequivocal sign of transgender identity (Caldarera et al., 2019). However, this does not detract from the evidence that transgender children tend to adopt stereotyped gender roles (Gavilán, 2018; Mayor, 2020; Zucker et al., 2006). The assumption of gender roles based on the assigned sex at birth is common for transgender children and, although it is important to distinguish their experience from that of gender non-conforming children, in both cases, when the gender expressions not in line with what is expected of their sex, discrimination and rejection may arise (Gegenfurtner & Gebhardt, 2017; Kattari, O'Connor & Kattari, 2018).

### 1.2. Child and youth transgender identity in schools

School must be a safe space where everyone can freely express their identity, and where understanding and acceptance of human sexual and gender diversity should be promoted (López-Sáez & Rodríguez, 2021). However, in the educational context, there are many signs of exclusion and discrimination of transgender people (Dugan, Kusel & Simounet, 2012; Fernández-Hawrylak, Tristán & Heras-Sevilla, 2020), which can lead to discomfort, anxiety, depression, low self-esteem, substance abuse, isolation, self-harm, and suicidal ideation (Becerra-Culqui et al., 2018; Spack, Edwards-Leeper & Feldman, 2012). The persistent discrimination suffered at school by transgender children highlights the need to ensure that teachers and institutions pay attention to sexual and gender diversity and inclusion at school (Fernández-Hawrylak et al., 2020; Kattari et al., 2018). In this sense, Kattari, Walls, Speer and Kattari (2016) pointed out that transgender people who are cared for by more inclusive teachers and health personnel are less likely to suffer from depression or experience suicidal thoughts. However, students still experience discomfort when discussing their identity or sexual issues with teachers (O'Donoghue & Guerin, 2017). The development of positive attitudes towards sexual and gender diversity among teachers is a key aspect for creating a school environment where transgender students can feel safe (Gegenfurtner et al., 2017), and in which teachers are empowered to better detect, manage or intervene to deal with bullying (Moyano & Sánchez-Fuentes, 2020).

Norton and Herek (2013) were the first to conclude that attitudes towards transgender individuals are significantly associated with demographic variables, as measured with feeling thermometer scales. Many of these studies show that there is a relationship between the development of positive attitudes towards transgender identity and other factors such as gender, where women endorse more positive attitudes (Billard, 2018; Silveira & Goff, 2016). Sexual orientation and religiosity also play a relevant role. For example, more favorable attitudes toward lesbian, gay and bisexual people are exhibited by those with same-sex orientation (Flores, 2015) and low religiosity (Campbell, H. & Anderson, 2019; Scandurra, Picariello, Valerio & Amodeo, 2017).

Teachers' approach to gender issues and diversity is another key determinant of attitudes, which are more favorable when teachers have received training relating to those issues (Case & Meier, 2014). Based on the likely positive effects of social transition on TGNC children, we aimed to identify factors related to teachers' willingness to facilitate (or not) their social transition. In this sense, it is likely that more positive attitudes towards TGNC children are associated with greater willingness to facilitate the transition of children of different ages (Gegenfurtner et al., 2017), and with the perception that transgender identity is not problematic (Elichberger, Glazier, Hill & Verdusco-Baker, 2016). Facilitating transition at older ages is also more likely, based on the "gender constancy" studies mentioned previously (Ruble et al., 2007).

### 1.3. Assessment of attitudes towards transgender people

Some recent systematic reviews of scales designed to measure gender identity/expression, gender dysphoria and attitudes towards transgender concluded that most scales did not adhere to best practice recommendations for scale development and validation (Bloom et al., 2021; Morrison et al., 2017). Only 2 of the 83 scales reviewed by Morrison et al. (2017) measure attitudes towards transgender identity in childhood and one was specifically developed for teachers. The first two scales, "Attitudinal measure of perceived appropriateness of transgender behavior in children" and "Behavioral intentions if respondents were various authority figures in a hypothetical (trans) child's life" have not been subsequently validated or translated into other languages. Meanwhile, a scale for teachers, the "Music Teachers' Attitudes Toward Transgender Students" (Silveira & Goff, 2016), includes some general statements related to transgender individuals (MT-ATTI) and music teachers' attitudes toward supportive school practices (MT-ATSSP), represented by items such as "Positive representations of transgender people should be included in the curriculum whenever possible".

### 1.4. The present study

The aim of this study was to develop and validate a scale that allows for more thorough examination of attitudes among elementary school teachers towards manifestations of transgender and/or gender nonconforming childhood (TGNC). The objectives were to examine the psychometric properties of the scale, specifically (a) to develop and validate it, and (b) provide evidence of its reliability and validity, and analyze its associations with variables such as gender, gender roles (femininity vs. masculinity), sexual orientation and religiosity. In addition, we examine the relationship between attitudes towards transgender and gender non-conforming children, and whether teachers judge transgender identity as problematic at school and are more willing to facilitate transition for children depending on their age.

We tested the following hypotheses: H1. Women hold more positive attitudes towards TGNC children in comparison to men (Billard, 2018; Silveira & Goff, 2016) H2. Individuals endorsing a more feminine gender role exhibit more positive attitudes towards TGNC children (Hentschel, Heilman & Peus, 2019; ). H3. Teachers who identify as LGBTI hold more positive attitudes towards TGNC children in comparison to those with a heterosexual orientation (Flores, 2015). H4. Religious teachers have less positive attitudes towards TGNC children in comparison to those who are not religious (Campbell et al., 2019; Scandurra et al., 2017). H5. Teachers who

have been trained on gender issues have more positive attitudes towards TGNC children in comparison to those who have not received training (Case & Meier, 2014). H6. More positive attitudes toward TGNC children are associated with greater willingness to facilitate transition in children of different ages (Gegenfurtner et al., 2017). H7. More positive attitudes toward TGNC children are associated with a lower likelihood of perceiving transgender identity as problematic (Elischberger et al., 2016). H8. Teachers' attitudes toward facilitating transition become more positive as the age of children/youths increases (Elischberger et al., 2016).

## 2. Methods

### 2.1. Participants

We examined data from 358 individuals. Our inclusion criteria were as follows: a) Spanish nationality; b) aged > 18 years; c) worked with children during their training, or professionally for at least 1 year as a practicing teacher; and d) enrolled in a childhood-related and/or primary education degree as a student or e) being a nursery and/or primary education teacher. Of our sample, 84.5% were women, 14.4% were men and only 1.1% did not provide an answer to this question. This asymmetry between the number of men and women reflects the gender bias known to occur for this vocation. According to the Spanish National Institute, in the period 2019–2020, about 97.7% of teachers in kindergarten education were women, and in elementary education the proportion was 82.1%. All of the pre-service teachers and teachers worked in public education centers. The age range of our participants was 18–64 years ( $M = 25.15$ ;  $SD = 9.40$ ). The number of years of teaching experience ranged from 1 to 38 ( $M = 15.72$ ,  $SD = 9.98$ ). Most participants had a heterosexual orientation (85%), followed by bisexual (10.2%) and homosexual (4.8%). About 25% of the sample indicated that they were religious (frequently participated in religious events). Regarding their background and training on transgender issues, only 12.6% of the participants reported that they had received training, although 42.3% stated that they had read or learned about this topic by themselves.

### 2.2. Procedure

We developed the *Attitudes toward Childhood Gender Identity Questionnaire for Teachers (ACGIQ-T)* based on items derived from the *Recalled Childhood Gender Identity/Gender Role Questionnaire (RCGI/GRQ)* (Zucker et al., 2006). The original scale consists of 23 items (for both the male and female versions) that measure male and female stereotypical behaviors. The scale was developed for completion by adolescents and/or adults who are required to retrospectively recall aspects of childhood gender identity and gender roles. Factor analysis of the original RCGI/GRQ identified a two-factor solution, in which Factors 1 and 2 pertained to childhood gender role/gender identity and parent-child relations (closeness to mother and father), respectively. The reliability (Cronbach's alpha) values for men and women were  $\alpha = 0.92$  and  $\alpha = 0.73$  for Factors 1 and 2, respectively. Other scales have also been developed based on similar items, such as the *Gender Identity Questionnaire for Children (GIQ-C)*. The GIQ-C measures gender expression and gender identity in children between the ages of 3–12 years, and there is a parent-reported version (Caldarera et al., 2019; Cohen-Kettenis et al., 2006; Johnson et al., 2004; Zucker, 2020) based on an earlier set of questions devised by Elizabeth and Green (1984).

For the purpose of the present study, we adapted the original instrument (RCGI/GRQ) as follows: 1) We selected most of the items from the original Factor 1, which evaluated childhood gender role/identity, although the following items were discarded: Items 13, 16, 17, 18, 19, 20, 22 and 23. Items 13, 16–17 and 22–23 are related to the relationship between the individual and their brother (item 13), and their mother/father (16–17 and 22–23), while items 18–20 measure aspects of the child's inner world, such as their perceived reputation, feelings and internal desire to be a boy/girl. 2) We devised instructions and an answer scale. The original scale had the following instructions: Please answer the following questions about your behavior as a child, that is, the years "0 to 12." For each question, circle the response that best describes your behavior as a child. Please note that there are no "right or wrong" answers. Example item 1: "As a child, my favorite playmates were: a. always boys, b. usually boys, c. boys and girls equally, d. usually girls, e. always girls, and f. I did not play with other children. In our version, the instructions were as follows: For each question, indicate the response that best describes how appropriate you consider the following behaviors. Please consider "boy" as someone who is born with masculine genitals and "girl" as someone who is born with feminine genitals. Item 1: The boy's favorite playmates are girls/The girl's favorite playmates are boys. a. Completely inappropriate, b. Inappropriate, c. Neutral, d. Appropriate and e. Completely appropriate. 3) We combined the male and female versions of the instrument. This decision was based on the study of Zucker et al. (2006), in which factorial loadings for the male and female versions were practically identical; moreover, our goal was to evaluate attitudes toward cross-gender behaviors.

A research team comprising bilingual psychologists and psychometric experts translated and adapted the 15-item scale from English into Spanish. We followed the guidelines of previous research (Elosua, Mujika, Almeida & Hermosilla, 2014; Muñiz & Fonseca-Pedrero, 2019), and the standards of the *American Educational Research Association (AERA)*, *American Psychological Association (APA)* and *National Council on Measurement in Education (NCME)* (2015). The initial translation was evaluated individually by a bilingual expert and one of the study researchers with knowledge of the sexuality literature. A bilingual expert performed a back translation of the first Spanish draft. This version was compared to the original one, and modifications were made to some items (although the content was not changed). Changes were made mainly to avoid literal translations. Then, a pilot study was carried out, which included 20 subjects with similar socio-demographic characteristics to those who were the target of the validation study. They were asked to indicate the extent to which they understood each item. They were also asked to identify any ambiguous expressions and to state the reason for the ambiguity. As agreement of  $\geq 85\%$  was achieved for all items, no changes were made.

After obtaining ethics approval from the University of [Blinded], we applied the incidental sampling technique to collect data

through an online survey. The URL with the questionnaires, which were allocated via the *SurveyMonkey* platform, was distributed via the news services of the participating universities, and by the social mailing lists of educational centers, as well as among the students. In addition, university teachers who encouraged the participation of their students, and the students themselves (who had been or were currently enrolled in their teaching training programs), also collaborated in the distribution of the online survey through educational centers. No personal information was requested or required from the participants; therefore, anonymity and confidentiality were guaranteed. The response limit feature of the online survey software was enabled; this prevents respondents from participating more

**Table 1**  
Means, standard deviations and factor loadings (EFA) of the ACGIQ-T items.

Items	M	SD	F1	F2
1 (1). Que las compañeras de juego habituales de un niño sean niñas / Que los compañeros de juego habituales de una niña sean niños The favorite boys playmates are girls/ The favorite girls playmates are boys	4.58	0.93	.903	
2 (2). Que la mejor amiga de un niño sea una niña / Que el mejor amigo de una niña sea un niño A boy's best or closest friend is a girl / A girl's best or closes friend is a boy	4.73	0.76	.879	
3 (3). Que los juguetes favoritos de un niño sean los considerados típicamente de niña / Que los juguetes favoritos de una niña sean los considerados típicamente de niño A boy's favorite toys and games are commonly considered feminine A girls favorite toys and games are commonly considered masculine	4.59	0.98	.682	
4 (4). Que la forma de actuar de un niño se asemeje a la de las niñas / Que la forma de actuar de una niña se asemeje a la de los niños Compared to other boys, a boy's activity level is similar to girls/ Compared to other girls, a girl's activity level is similar to boys/	4.65	0.79		.623
5 (5). Que un niño experimente con maquillaje o con joyas / Que una niña experimente con espuma de afeitar A boy experiment with cosmetics (make-up) and jewelry A girl experiment with shaving foam	4.70	0.69		.819
6 (6). Que un niño imite, admire o se identifique con personajes femeninos que aparecen en televisión o en películas / Que una niña imite, admire o se identifique con personajes masculinos que aparecen en televisión o en películas A boy imitates, admires or identifies himself with feminine characters on TV or in movies A girl imitates, admires or identifies herself with masculine characters on TV or in movies	4.75	0.65		.858
7 (7). Que un niño disfrute o prefiera practicar deportes como el baloncesto o el fútbol con niñas / Que una niña disfrute o prefiera practicar deportes como el baloncesto o el fútbol con niños A boy enjoyed playing sports such as hockey, basketball or soccer with girls A girl enjoyed playing sports such as hockey, basketball or soccer with boys	4.80	0.57		.716
8* (8). Que un niño, en juegos de rol, adopte el papel de los personajes o jugadores femeninos / Que una niña, en juegos de rol, adopte el papel de personajes o jugadores masculinos A boy, in fantasy or pretend play, take the role of girls A girl, in fantasy or pretend play, take the role of boys	4.80	0.55		.781
9 (9). Que un niño, para jugar, elija vestimenta típicamente femenina / Que una niña, para jugar, elija vestimenta típicamente masculina A boy, in dress-up play, wears women's clothing A girl, in dress-up play, wears men's clothing	4.75	0.64		.810
10 (10). Que un niño manifieste sentirse como una niña / Que una niña manifieste sentirse como un niño A boy expresses feeling as a girl. A girl expresses feeling as a boy.	4.68	0.76		.955
11* (11). Que un niño se sienta o se vea tan femenino como otras compañeras / Que una niña se sienta o se vea tan masculina como otros compañeros A boy, feels or sees himself as feminine as others girls A girl feels or sees herself as masculine as others boys	4.71	0.72		.973
12 (12). Que un niño se sienta o vea tan femenino como su hermana / Que una niña se sienta o vea tan masculina como su hermano A boy, feels or sees himself as feminine as his sister A girl feels or sees herself as masculine as her brother	4.69	0.72		.945
13 (14). Que la apariencia física de un niño (pelo, vestimenta) se asemeje a la de una niña / Que la apariencia física de una niña (pelo, vestimenta) se asemeje a la de un niño/ A boy's physical appearance (hair style, clothing, etc.) is "feminine" A girls physical appearance (hair style, clothing, etc.) is "masculine"	4.70	0.69		.872
14 (15). Que a un niño le guste llevar vestidos o ropa típicamente femenina / Que a una niña le guste llevar ropa típicamente masculina A boy enjoys wearing dresses and other "feminine" clothes. A girl enjoys wearing dresses and other "masculine" clothes.	4.71	0.69		.950
15 (20-21). Que un niño sienta el deseo de ser considerado y tratado como una niña y manifieste o exponga este deseo frente a los demás / Que una niña sienta el deseo de ser considerada y tratada como un niño y manifieste o exponga este deseo frente a los demás A boy has the desire to be considered a girl, treated as a girl and tells openly to others to have the desire to be a girl A girl has the desire to be considered a boy, treated as a boy and tells openly to others to have the desire to be a girl	4.72	0.75		.982

*Note.* In brackets the corresponding number of the RCGI/GRQ (Zucker et al., 2006) from which the measure was developed is indicated. \*Items that were eliminated once all the statistical analyses were conducted.

than once. There was no compensation for taking part in the study.

The recruitment strategy that we employed is considered reliable; a previous systematic review of sexuality research (King, 2022) concluded that, although sensitive topics can lead to social desirability bias (a), self-report research should favor online surveys over paper-and-pencil techniques, and (b) responses are more accurate when respondents answer questions anonymously under self-administered conditions.

### 2.3. Measures

We asked the participants for some sociodemographic information, such as gender (masculine, feminine, or other), age, whether they had experience with children (for at least 1 year), number of years of teaching experience, whether they were currently university student or teachers, and what type of educational center they were trained in or work in (public, private or other). Information on sexual orientation and religiosity was also requested. For sexual orientation, the response options were as follows: heterosexual, homosexual, bisexual, and other (assigned values of 1, 2, 3 and 4, respectively). Religiosity was measured by a single item with a dichotomous answer scale (Yes/No): “I consider myself a religious person (I frequently attend at religious services)”. We also assessed whether they had received training on transgender issues (Yes/No) and whether they had read or learned about this topic (Yes/No).

*Attitudes toward Childhood Gender Identity Questionnaire for Teachers (ACGIQ-T)*. The ACGIQ-T consists of 15 items that measure teachers’ attitudes towards both male and female patterns of childhood cross-gender identity using a 5-point Likert scale ranging from 1 (*Completely inappropriate*) to 5 (*Completely appropriate*). The items are all scored such that a higher score indicates greater agreement with gender non-conforming behaviors, feelings or expressions. The summary score is calculated by summing the scores for all of the items.

To evaluate attitudes towards transgender identity, we used the vignettes designed by Elischberger et al. (2016); two versions were administered (Male to Female and Female to Male; M-F and F-M, respectively). Each participant was asked to read a description of someone that was approximately 130 to 150 words long and clearly stated their birth sex and name (Emma and Ethan in the original version, “Sofia” and “Mateo” in the Spanish version), as well as the fact that they identified with the other gender and preferred to be called by a gender-appropriate name. Each vignette provided a general description of the child, including their clothing preferences (e.g., skirts and dresses vs. t-shirts and cargo pants), how they wear their hair (e.g., long vs. short), and the activities they like to take part in (e.g., jump rope vs. capture the flag). The descriptions differed only in terms of birth and gender. The participants were asked to rate whether they consider the situation as appropriate. Then, they were asked to indicate whether they would facilitate transition for the individuals described at different ages, as follows: “If you knew Sofia/Mateo, to what extent would it be appropriate for her to be supported to transition as soon as possible (i.e., to treat her according to what she claims to be) if she was 3 years old?/8 years old?/16 years old?” The response options ranged from 1 to 10 (1 = Not at all appropriate, 10 = Very appropriate).

Based on the study of Elischberger et al. (2016), the respondents were asked to indicate how much they agreed with the following statements pertaining to the perception of transgender as problematic in relation to vignettes representing Situation 1 (M-F) and Situation 2 (F-M). Item 1: *I consider it a problem because it could damage their relationships with their classmates*. Item 2: *I consider it a problem because it will negatively influence other children and adolescents*. Item 3: *I consider it a problem because it may affect the sexual orientation and/or identity of the child*. The response options ranged from 1 (*Completely disagree*) to 10 (*Completely agree*).

Gender roles were assessed using a brief version of the *Bem Sex Role Inventory* (BSRI; Bem, 1974; Fernández, Quiroga, Del Olmo & Rodríguez, 2007 of Berrocal, Cervilla, Álvarez-Muelas and Sierra (2022)). Through eight items, the BSRI evaluates the self-described gender role according to a series of personality traits related to gender stereotypes; four items represent the masculine dimension (Behaves like a leader, Has leadership abilities, Dominant and Strong personality) and another four the feminine dimension (Sensitive to needs of others, Compassionate, Gentle/Polite and Affectionate). The Likert-type response scale ranges from 1 (*Never*) to 7 (*Always*). Indices of Masculinity (M) and Femininity (F) are obtained from these scores, according to which the respondent is classified as masculine or feminine. In the present study, the Cronbach’s alpha was 0.67 and 0.81 for Femininity and Masculinity, respectively.

## 3. Results

### 3.1. Descriptive statistics of items

The response range was 1–5, and the mean scores for all items were very close to the upper limit. As can be seen in Table 1, the lowest mean score was that for item 1 (“*The favorite boys playmates are girls/The favorite girls playmates are boys*”) ( $M = 4.58$ ,  $SD = 0.93$ ), while the highest mean scores were those for items 7 (“*A boy enjoyed playing sports such as hockey, basketball or soccer with girls*” / “*A girl enjoyed playing sports such as hockey, basketball or soccer with boys*”) and 8 (“*A boy, in fantasy or pretend play, takes the role of girls*” / “*A*”).

**Table 2**  
Goodness-of-fit indices for the CFA in the ACGIQ-T items.

	$\chi^2$	df	RMSEA	TLI	CFI	AIC	BCC
Model 1: Two-factor model (15 items)	775.64	89	.12	.797	.828	837.64	843.06
Model 2: Three-factor (15 items)	575.68	87	.10	.852	.877	641.68	647.45
Model 2 (a): Three-factor (item 8 discarded)	442.74	74	.09	.872	.896	504.74	509.79
Model 2 (b): Three-factor (items 8 and 11 discarded)	347.17	62	.08	.901	.907	405.17	409.56

girl, in fantasy or pretend play, takes the role of boys”) ( $M = 4.80$ ). These scores reflect positive attitudes toward the non-conforming roles, behaviors and feelings/expressions described in the items.

To examine the factorial structure of the scale through both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), we randomly split our sample into two: Sample 1 ( $n = 158$ ; 15.7% men and 83.6% women) and Sample 2 ( $n = 200$ ; 15% men and 83% women). Reliability and validity were assessed based on the scores of the total sample.

### 3.2. Exploratory factor analysis (EFA)

The EFA was conducted on Sample 1. First, the suitability of the data for factorization was verified by the KMO test ( $= 0.914$ ) and Bartlett’s sphericity test ( $\chi^2 = 3167.33$ ;  $p < 0.001$ ). EFA was performed through principal component analysis (PCA) with the oblimin rotation method. A parallel analysis confirmed the EFA’s findings. Following these analyses, a two-factor structure was verified, which explained 78.36% of the total variance. The factor loadings were significant and ranged between 0.54 (for item 4) and 0.97 (for item 12). There were no significant shared loadings across factors. For both factors, the eigenvalues exceeded 1. The first factor comprised items 4 to 15 and explained 68.73% of the variance. Factor 2 comprised items 1 to 3 and explained 9.64% of the variance.

### 3.3. Confirmatory factor analysis (CFA)

As shown in Table 2, initially, a two-dimensional model derived from the EFA was tested (Model 1). This model did not show a good fit. The goodness-of-fit indices were below the cut-off, with the TLI and CFI values equaling 0.82 and 0.84, respectively, which is lower than the minimum of 0.90. By examining the modification indices, we noted that correlating the errors of several items would improve the fit of the model. However, even though the model improved after correlating some errors, the values did not reach the minimum cut-off. Therefore, given that some of the items were more related to each other than others, and assuming that three different groups should be distinguished, a three-factor structure was tested (Model 2).

The three-factor structure was as follows: Factor 1: items 1–3; Factor 2: items 4–9; and Factor 3: items 10–15. The goodness of fit indices were better than for the two-factor structure; however, some values still failed to meet the minimum criteria. Therefore, on the

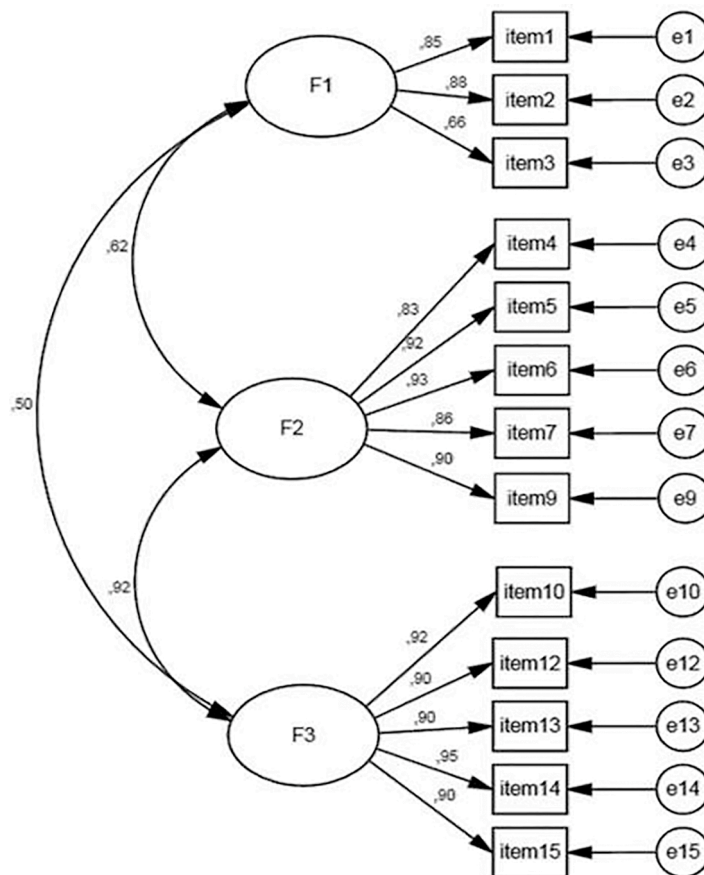


Fig. 1. Standardized loadings of the three-factor ACGIQ-T structure. F1: Cross-gender roles in leisure/friendship. F2: Cross-gender-typical behaviors F3: Cross-gender feelings/expressions.

**Table 3**  
Pearson correlations among the ACGIQ-T factors and the examined variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Gender*																
Femininity	.06															
Masculinity	−0.17**	.09														
ACGIQ-1	.06	.12*	−0.06													
ACGIQ-2	.19***	.18**	−0.09	.62***												
ACGIQ-3	.26***	.14*	−0.07	.50***	.92***											
M-F Situation	.34***	.24***	−0.05	.27***	.50***	.65***										
F-M Situation	.30***	.22***	−0.05	.26***	.51***	.65***	.94***									
M-F Transition 3 yr.	.14**	.09	.00	.10*	.26***	.35***	.38***	.40***								
M-F Transition 8 yr.	.26***	.15**	−0.00	.17**	.37***	.48***	.51***	.52***	.83***							
M-F Transition 16 yr.	.27***	.16**	−0.04	.23***	.43***	.58***	.61***	.64***	.51***	.74***						
F-M Transition 3 yr.	.15**	.07	−0.00	.10*	.26***	.35***	.38***	.40***	.98***	.84***	.51***					
F-M Transition 3 yr.	.22***	.13*	−0.00	.17**	.36***	.48***	.50***	.52***	.85***	.97***	.74***	.85***				
F-M Transition 3 yr.	.28***	.15**	−0.05	.22***	.42***	.58***	.62***	.64***	.50***	.74***	.97***	.50***	.74***			
Problem 1	−0.18**	−0.08	.08	−0.14**	−0.27***	−0.30***	−0.34***	−0.31***	−0.10*	−0.19***	−0.30***	−0.10	−0.19***	−0.30***		
Problem 2	−0.09	−0.05	.06	−0.13*	−0.20***	−0.25***	−0.29***	−0.30***	−0.04	−0.16**	−0.31***	−0.03	−0.16**	−0.33***	.70***	
Problem 3	−0.14**	−0.06	.11*	−0.12*	−0.19***	−0.30***	−0.42***	−0.44***	−0.20***	−0.26***	−0.41***	−0.20***	−0.28***	−0.39***	.74***	.74***

\* Gender: 1 = masculine, 2 = feminine. \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ .

basis of modification indices, item 8 was eliminated, as its content seemed to overlap with that of item 7; this change improved the model, but not sufficiently. Therefore, item 11 was also eliminated, as it showed a degree of overlap with item 10.

After eliminating items 7 and 11, Model 2(b) achieved optimum goodness of fit indices. The ACGIQ-T comprised 13 items, of which the overall squared multiple correlation (SMC) was 0.77; this indicated that 77% of the variance was explained by the latent factors. The correlation between Factors 1 and 2 was 0.62, while that between Factors 2 and 3 was 0.92, and that between Factors 1 and 3 was 0.50; thus, all three factors were related (Fig. 1). Standardized weights ranged from 0.66 (item 3) to 0.93 (item 6). As stated above, the items were distributed among three factors that were labelled as follows based on their content: Factor 1: Cross-gender roles in leisure/friendship; Factor 2: Cross-gender-typical behaviors; and Factor 3: Cross-gender feelings/expressions.

### 3.3. Reliability

To measure reliability, we assessed the homogeneity (internal consistency) of the scale items by calculating the Cronbach's alpha and McDonald's Omega coefficients, for each of the three factors separately and for the entire scale. Internal consistency was adequate, with values above 0.80 for all factors. The Cronbach's alpha values for Factors 1, 2 and 3 were 0.82, 0.94 and 0.96, respectively, and that for the entire scale was 0.95. The McDonald's Omega coefficients were 0.81, 0.95 and 0.97 for Factors 1, 2 and 3, respectively, and that for the entire scale was 0.95.

### 3.4. Concurrent validity

First, we carried out Pearson correlation analysis of all of the ACGIQ-T dimensions, gender and gender roles (femininity-masculinity). Both ACGIQ-2 and ACGIQ-3 were significantly correlated with gender: the rate of agreement with cross-gender behaviors and feelings was higher for women than men. Regarding gender roles, femininity, but not masculinity, was associated with all three factors although  $p$  values were significant at  $p < .05$  and  $p < 0.01$  levels.

Second, we examined the associations between ACGIQ-T factors and the degree to which M-F transition and F-M transition (at the ages of 3, 8 and 16, years) were considered problematic. The results showed that all three ACGIQ factors were positively associated with the degree to which the transitions were considered appropriate, for all ages. The correlation between ACGIQ-1 and transition at the age of 3 years (either M-F or F-M) was the weakest ( $r = 0.10$ ), although it was significant at  $p < 0.05$ . This was followed by transition at 8 years old, for both M-F and F-M ( $r = .17$ ;  $p < 0.01$ ), and finally by transition at 16 years old ( $r = 0.23$  and  $r = 0.22$  for M-F and F-M, respectively,  $p < .001$ ). Finally, all three ACGIQ factors were negatively correlated with the degree to which the transition process was considered problematic (Table 3).

Third, to analyze whether the scores for the ACGIQ factors differed by sexual orientation (heterosexual, homosexual, or bisexual), religiosity (Yes/No), previous training on gender issues (Yes/No), and whether the participants had read about this topic, MANOVA was conducted. The ACGIQ-1 [ $F_{(2,349)} = 0.198$ ;  $p = .820$ ], ACGIQ-2 [ $F_{(2,349)} = 0.570$ ;  $p = .566$ ] and ACGIQ-3 [ $F_{(2,349)} = 1.70$ ;  $p = .183$ ] scores did not differ according to sexual orientation. Similarly, the ACGIQ-1 [ $F_{(2,354)} = 0.490$ ;  $p = .484$ ], ACGIQ-2 [ $F_{(2,354)} = 0.171$ ;  $p = .191$ ] and ACGIQ-3 [ $F_{(2,354)} = 3.41$ ;  $p = .066$ ] did not differ according to religiosity. Finally, no significant differences emerged depending on whether the participants had received training on gender issues (ACGIQ-1 [ $F_{(2,355)} = 0.207$ ;  $p = .665$ ], ACGIQ-2 [ $F_{(2,355)} = 0.103$ ;  $p = .800$ ], and ACGIQ-3 [ $F_{(2,355)} = 1.20$ ;  $p = .593$ ]) or whether they had read about this topic (ACGIQ-1 [ $F_{(2,355)} = 0.1159$ ;  $p = .068$ ], ACGIQ-2 [ $F_{(2,355)} = 0.996$ ;  $p = .052$ ], and ACGIQ-3 [ $F_{(2,355)} = 3.35$ ;  $p = .171$ ]).

Finally, to gain more insight about whether teachers' willingness to facilitate transition differs according to the age of the children/youths, repeated-measures ANOVA was conducted. For both the male ("Mateo") and female ("Sofia") version, significant differences were found across the three ages, that is, between transition at 3 and 8 years [ $t_{(354)} = -14.75$ ;  $p < .001$ ], 3 and 16 years [ $t_{(354)} = -13.60$ ;  $p < .001$ ] and 8 and 16 years [ $t_{(354)} = -17.33$ ;  $p < .001$ ]; transition at older ages was more likely to be supported (transition at 16 years,  $M = 9.29$ ,  $SD = 1.70$ ; transition at 8 years,  $M = 8.20$ ,  $SD = 2.26$ ; transition at 3 years,  $M = 7.04$ ,  $SD = 2.83$ ). Similar findings were found for "Sofia", i.e., there were significant differences between scores for transition at 3 and 8 years [ $t_{(358)} = -14.31$ ;  $p < .001$ ], 3 and 16 years [ $t_{(354)} = -13.22$ ;  $p < .001$ ] and 8 and 16 years [ $t_{(354)} = -17.39$ ;  $p < .001$ ]; again, transition at older ages was more likely to be supported (transition at 16 years,  $M = 9.28$ ,  $SD = 1.70$ ; transition at 8 years,  $M = 8.22$ ,  $SD = 2.26$ ; and transition at 3 years,  $M = 7.05$ ,  $SD = 2.82$ ).

## 4. Discussion

The purpose of this study was to develop, and provide evidence for the validity and reliability of, an instrument to measure teachers' attitudes toward gender nonconforming children. We developed the scale using items from the *Recalled Childhood Gender Identity/Gender Role Questionnaire* (RCGI/GRQ; Zucker et al., 2006); we selected 15 items that well-expressed some of the external manifestations of male and female stereotypical behaviors, which teachers were asked to evaluate in terms of appropriateness. A final 13-item version of the scale was validated using a three-factor structure comprising Cross-gender roles in leisure/friendship, Cross-gender-typical behaviors, and Cross-gender feelings/expressions. The scale showed evidences of validity, supported by its relationship with other related variables and high reliability.

Our sample of 358 Spanish teachers obtained scores close to 5 (between 4.48 and 4.80) on all items. These scores reflect positive attitudes towards non-conformist roles, behaviors and feelings/expressions, and are in line with other studies assessing teachers' attitudes conducted in various countries. For example, Silveira and Goff (2016) examined 75 in-service teachers and 105 pre-service teachers in Australia and reported a mean attitude score of 4.17 on a five-point scale, with higher scores indicating more positive



attitudes toward transgender identity. In a US study by Burnham (2020), an average score of 4.9 on a five-point scale was obtained for 123 pre-service teachers, while Gegenfurtner (2021) reported similar results for a sample of 560 pre-service teachers (mean feeling thermometer score of 62.36 on a 0–100-point scale). Similarly, in an Italian study, Scandurra et al. (2017) explored transphobic attitudes among 438 pre-service teachers and reported a mean attitude score of 2.44 on a seven-point scale, with lower scores indicating less transphobic attitudes. Such attitudes may have improved over time given the increased visibility of transgender children in recent years (Gegenfurtner, 2021; Ozamiz-Etxebarria, Picaza, Jiménez-Etxebarria & Cornelius-White, 2020). In the case of Spain, greater visibility of transgender children has been promoted primarily by associations of families who are committed to accepting their sons and daughters, and demand that their children be treated according to their gender identity rather than the sex assigned at birth (Gavilán, 2018); this has resulted in greater attention being paid to sexual and gender diversity in the domain of education, which is embodied by the Organic Law on Education (the Organic Law 3/2020 - LOMLOE).

A three-factor structure for the ACGIQ-T emerged from the CFA. Our findings indicate three “levels” of cross-gender manifestations, i.e., more leisurely activities, a second level covering a wide range of cross-gender behaviors, and a third factor that subsumes cross-gender feelings, desires and manifestations. Although all of these elements are covered by currently available scales measuring transgender behaviors, it is likely that the third dimension provides the most precise measure of the desire to live as, and express oneself, as being of the opposite sex; in contrast, dimensions 1 and 2 reflect more common stereotypical behaviors and roles. This accords with previous epidemiological research from the World Professional Association for Transgender Health, which indicates that the frequency with which the desire to be a member of the opposite sex is expressed is quite low relative to the frequency of periodic cross-gender behavior (Zucker & Lawrence, 2009). Therefore, these cross-gender behaviors can be considered a key element for transition. As indicated by Ehrensaft (2014), some professionals recommend that social transition be facilitated when marked gender-variant behavior is displayed, including expression of the desire to be a member of the other gender. Therefore, it is likely that the above-described factor including cross-gender feelings and desires would be most closely related to “gender dysphoria” as described by the DSM-5 (i.e., as “a marked incongruence between one’s experienced/expressed gender and assigned gender”).

We eliminated items 8 (“A boy, in fantasy or pretend play, takes the role of girls” / “A girl, in fantasy or pretend play, take the role of boys”) and 11 (“A boy feels or sees himself as being as feminine as other girls/A girl feels or sees herself as being as masculine as other boys”), because this significantly improved the model’s goodness of fit indices. Similarly, in the proposed revision for administering and scoring the GIQ of Hoq et al. (2022), they suggested eliminating the item referring to playing sports with girls/boys based on a factor analysis. Meanwhile, item 11 was shown to overlap with item 10; both pertain to similar feelings/expressions, i.e., of being a girl (boy) (item 10) or being feminine (masculine) (item 11). It is likely that teachers cannot perceive, and are unaware, about whether a particular child feels as feminine or masculine as others, as this relates to the child’s inner world and is thus more difficult to observe relative to the overt expression of feelings captured by item 10.

Confirming our first hypothesis, our results indicate that women consider cross-gender behaviors and feelings more appropriate compared with men, as indicated by the significant association between gender and factors 2 and 3. Concerning gender roles, femininity, in contrast to masculinity, was related to all three domains of the ACGIQ-T. Both of these findings are consistent with previous research in which women and individuals with more community-oriented characteristics, such as concern for others, sociability and emotional sensitivity (Hentschel et al., 2019), also tended to empathize with gender nonconforming behaviors (see also Harrison & Michelson, 2019); this confirms the second hypothesis of this study, according to which individuals endorsing more feminine gender roles will exhibit more positive attitudes towards TGNC children. In our study, sexual orientation, religiosity or training on gender issues were not associated with the ACGIQ-T dimensions, therefore, our third, fourth and fifth hypotheses are not supported. This could be because both the general population and teachers tend to show more positive attitudes towards non-normative gendered behaviors of minors than adults (Elischberger et al., 2016; Silveira & Goff, 2016). In addition, teachers tend to promote gender integration and mixed-gender interactions, and to support students’ social development in this respect, including through peer relationships (Fragó et al., 2022). This might reduce the impact of factors such as one’s own sexual orientation (Flores, 2015), religiosity (Campbell et al., 2019; Scandurra et al., 2017) or previous formation or training (Case & Meier, 2014). Furthermore, some research highlights that teachers are generally characterized by high levels of empathy, which may increase inclusive attitudes and practices (Navarro-Mateu, Franco-Ochoa, Valero-Moreno & Prado-Gascó, 2019).

Regarding the last three hypotheses proposed, the present study indicates that, as the age of transition increases (from 3 to 16 years in this case), attitudes towards cross-gender behaviors become more positive. In addition, this trend was stronger for factor 3 than factors 1 and 2, indicating that clear manifestations of transgender identity are more strongly supported than cross-gender behaviors and cross-gender play preferences. Therefore, although individuals with more positive attitudes toward transgender identity are more willing to facilitate transition at any age, it seems that there is an implicit assumption that gender identity is more consolidated at older than younger ages. In fact, there is substantial evidence that very young children can be aware of their gender identity (Ehrensaft, 2017; Moral-Martos et al., 2022), which may be established at around 2 to 3 years of age (Gómez-Gil et al., 2006). Moreover, prepubertal children who claim to be transgender know what their sex is as unambiguously and consistently as their cisgender peers (Olson, Durwood, DeMeules & McLaughlin, 2016; Rafferty et al., 2018).

Therefore, some false beliefs and myths around transgender children and gender identity development still persist (Platero & López-Sáez, 2020). These findings have important implications, as facilitating social transition before puberty has several benefits for transgender children (Durwood, McLaughlin & Olson, 2017; Ehrensaft et al., 2017; Olson et al., 2016).

Some limitations of this study should be taken into consideration. First, an incidental sampling technique was used; a more representative sample is needed to generalize our findings. Second, although our study guaranteed anonymity and confidentiality, we did not control for biases such as social desirability and misreporting socially undesirable behaviors (King, 2022). Third, the study was cross-sectional; longitudinal studies would provide a clearer picture of the phenomenon under study. Further research should

investigate how teachers' attitudes can help us predict their behaviors and management of situations in which bullying could arise due to cross-gender manifestations. Finally, our study only considers the binary identities of girls and boys, rather than youths who may identify as non-binary or, gender-fluid, among other identities.

Despite its limitations, this is the first study to develop and validate a measure to evaluate teachers' attitudes toward childhood gender identity. The scale constitutes a reliable and valid means for measuring (1) cross gender play preferences, (2) cross-gender behaviors and (3) cross-gender feelings/expressions, and could be useful for both education and research.

This study has several implications for the educational field. Firstly, it shows the importance of teachers' attitudes towards TGNC students in terms of preventing transphobia and creating safe spaces in the school environment, and provides a tool for specifically designed for assessing the attitudes of nursery and elementary school teachers. Moreover, it underlines the need to train teachers in sexual and gender diversity as a basis for preventing negative attitudes towards TGNC children. From this perspective, an approach that enhances children's own agency is needed, as a first step to strengthen children's rights and create a more positive environment in institutions such as schools (Kannisto, 2019).

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## Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## Declaration of Competing Interest

None.

## References

- Abramowitz, J. (2018). Transgender medicine-transitioning transgender children to adulthood. *Reviews in Endocrine and Metabolic Disorders*, 19(3), 227–230. <https://doi.org/10.1007/s11154-018-9458-z>
- Becerra-Culqui, T. A., Liu, Y., Nash, R., Cromwell, L., Flanders, W. D., Getahun, D., et al. (2018). Mental health of transgender and gender nonconforming youth compared with their peers. *American Academy of Pediatrics (AAP)*. <https://doi.org/10.1542/peds.2017-3845>
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42, 155–162. <https://doi.org/10.1037/h0036215>
- Berocal, C. G., Cervilla, O., Álvarez-Muelas, A., & Sierra, J. C. (2022). The Bem sex-role inventory: Proposal of a short version in Spanish. *Anales de Psicología*, 38(3), 530–537. <https://doi.org/10.6018/analesps.502311>
- Billard, T. J. (2018). Attitudes toward transgender men and women: Development and validation of a new measure. *Frontiers in Psychology*, 9, 387. <https://doi.org/10.3389/fpsyg.2018.00387>
- Bloom, T. M., Nguyen, T. P., Lami, F., Pace, C. C., Poulakis, Z., Telfer, M., et al. (2021). Measurement tools for gender identity, gender expression, and gender dysphoria in transgender and gender-diverse children and adolescents: A systematic review. *The Lancet Child & Adolescent Health*, 5(8), 582–588. [https://doi.org/10.1016/S2352-4642\(21\)00098-5](https://doi.org/10.1016/S2352-4642(21)00098-5)
- Burnham, H. B., & Burnham, H. B. (2020). An investigation into teachers' self-reported attitudes and self-efficacy toward transgender youth in the northeast. *Dissertation & Theses Collection*. AAI27960150 <https://scholarsarchive.jwu.edu/dissertations/AAI27960150>.
- Caldarera, A. M., Marengo, D., Gerino, E. E., Brustia, P., Rollè, L. L., & Cohen-Kettenis, P. T. (2019). A parent-report gender identity questionnaire for children: psychometric properties of an Italian Version. *Archives of sexual behavior*, 48(5), 1603–1615. <https://doi.org/10.1007/s10508-018-1372-7>
- Campbell, M. H. J., & Anderson, J. R. (2019). A systematic review of the relationship between religion and attitudes toward transgender and gender-variant people. *International Journal of Transgenderism*, 20(1), 21–38. <https://doi.org/10.1080/15532739.2018.1545149>
- Case, K. A., & Meier, S. C. (2014). Developing allies to transgender and gender-nonconforming youth: Training for counselors and educators. *Journal of LGBT Youth*, 11, 62–82. <https://www.tandfonline.com/doi/full/10.1080/19361653.2014.840764>.
- Cohen-Kettenis, P. T., Wallien, M., Johnson, L. L., Owen-Anderson, A. F., Bradley, S. J., & Zucker, K. J. (2006). A parent-report gender identity questionnaire for children: A cross-national, cross-clinic comparative analysis. *Clinical Child Psychology and Psychiatry*, 11(3), 397–405. <https://doi.org/10.1177/1359104506059135>
- Dugan, J. P., Kusel, M. L., & Simounet, D. M. (2012). Transgender college students: An exploratory study of perceptions, engagement, and educational outcomes. *Journal of College Student Development*, 53(5), 719–736.
- Durwood, L., McLaughlin, K. A., & Olson, K. R. (2017). Mental health and self-worth in socially transitioned transgender youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(2), 116–123. <https://doi.org/10.1016/j.jaac.2016.10.016>
- Ehrensaft, D. (2014). From gender identity disorder to gender identity creativity: True gender self child therapy. *Treating Transgender Children and Adolescents*, 59, 43–62. <https://doi.org/10.1080/00918369.2012.653303>
- Ehrensaft, D. (2017). Gender nonconforming youth: Current perspectives. *Adolescent health, medicine and therapeutics*, 8, 57–67. <https://doi.org/10.2147/AHMT.S110859>
- Elishberger, H. B., Glazier, J. J., Hill, E. D., & Verdusco-Baker, L. (2016). Boys Don't Cry?—Or Do They? Adult Attitudes Toward and Beliefs About Transgender Youth. *Sex roles*, 75(5–6), 197–214. <https://doi.org/10.1007/s11199-016-0609-y>
- Elizabeth, P. H., & Green, R. (1984). Childhood sex-role behaviors: Similarities and differences in twins. *Acta Geneticae Medicae et Gemellologiae: Twin Research*, 33(2), 173–179.
- Elosua, P., Mujika, J., Almeida, L. S., & Hermosilla, D. (2014). Adaptación al español de la batería de pruebas de razonamiento [Judgmental-analytical procedures for adapting tests: Adaptation to Spanish of the Reasoning Tests Battery]. *Revista Latinoamericana de Psicología*, 46, 117–126. [https://doi.org/10.1016/S0120-0534\(14\)70015-9](https://doi.org/10.1016/S0120-0534(14)70015-9)
- Faragó, F., Savoy, S., Sanchez, E. A., Khaleghi, N., Evans, L., & Adams, E. L. (2022). Gender Typicality, Pressure to Conform to Gender Norms, and Anti-Fat and Appearance Stereotypes in Girls. *Archives of Sexual Behavior*, 1–16. <https://doi.org/10.1007/s10508-021-02252-w>
- Fernández, J., Quiroga, M.Á., Del Olmo, I., & Rodríguez, A. (2007). Escalas de masculinidad y feminidad: Estado actual de la cuestión [Masculinity and femininity scales: Current state of the art]. *Psicothema*, 19, 357–365.

- Fernández-Hawrylak, M., Tristán, G., & Heras-Sevilla, D. (2020). Actitudes hacia la transgeneridad y la transexualidad en el ámbito universitario. Un estudio preliminar [Attitudes toward transgender and transsexuality among undergraduate students: A preliminary study]. *International Journal of Developmental and Educational Psychology*, 1(1), 393–404.
- Flores, A. R. (2015). Attitudes toward transgender rights: Perceived knowledge and secondary interpersonal contact. *Politics, Groups, and Identities*, 3(3), 398–416. <https://doi.org/10.1080/21565503.2015.1050414>
- Gavilán, J. (2018). *Infancia y transexualidad [Childhood and transsexuality]*. Granada: Ediciones Octaedro Andalucía-Ediciones Mágina.
- Gegenfurtner, A. (2021). Pre-service teachers' attitudes toward transgender students: Associations with social contact, religiosity, political preference, sexual orientation, and teacher gender. *International Journal of Educational Research*, 110, 1–8. <https://doi.org/10.1016/j.ijer.2021.101887>
- Gegenfurtner, A., & Gebhardt, M. (2017). Sexuality education including lesbian, gay, bisexual, and transgender (LGBT) issues in schools. *Educational Research Review*, 22, 215–222. <https://doi.org/10.1016/j.edurev.2017.10.002>
- Gómez-Gil, E., Esteve, I., & Fernández-Tresguerres, J. A. (2006). Causas o fundamentos fisiológicos [Causes or physiological foundations]. In E. Gómez-Gil, & I. Esteve de Antonio (Eds.), *Ser transexual. dirigido al paciente, a su familia, y al entorno sanitario, judicial y social [Being transsexual: To patients, its family and the healthy, legal and social environment]* (pp. 113–124). Barcelona: Glosa.
- Harrison, B. F., & Michelson, M. R. (2019). Gender, masculinity threat, and support for transgender rights: An experimental study. *Sex roles*, 80(1), 63–75. <https://doi.org/10.1007/s11199-018-0916-6>
- Hentschel, T., Heilman, M. E., & Peus, C. V. (2019). The multiple dimensions of gender stereotypes: A current look at men's and women's characterizations of others and themselves. *Frontiers in Psychology*, 10, 11. <https://doi.org/10.3389/fpsyg.2019.00011>
- Hoq, M., Lami, F., Tollit, M. A., & Pang, K. C. (2022). Gender identity questionnaire for children: An alternative scoring approach reflecting a child's affirmed gender identity. *International Journal of Transgender Health*, 1–4. <https://doi.org/10.1080/26895269.2022.2129612>
- Johnson, L. L., Bradley, S. J., Birkenfeld-Adams, A. S., Kuxsis, M. A. R., Maing, D. M., & Mitchell, J. N. (2004). A Parent-Report Gender Identity Questionnaire for Children. *Archives of Sexual Behavior*, 33(2), 105–116. <https://doi.org/10.1023/B:ASEB.0000014325.68094.f3>
- Kaltiala-Heino, R., Bergman, H., Työläjärvi, M., & Frisén, L. (2018). Gender dysphoria in adolescence: Current perspectives. *Adolescent health, medicine and therapeutics*, 9, 31–41. <https://doi.org/10.2147/AHMT.S135432>
- Kannisto, T. (2019). Trans\* kinship, children's rights, and the school. *International Journal of Educational Research*, 94, 183–192. <https://doi.org/10.1016/j.ijer.2019.01.003>
- Kattari, S. K., O'Connor, A. A., & Kattari, L. (2018). Development and Validation of the Transgender Inclusive Behavior Scale (TIBS). *Journal of Homosexuality*, 65(2), 181–196. <https://doi.org/10.1080/00918369.2017.1314160>
- Kattari, S. K., Walls, N. E., Speer, S. N., & Kattari, L. (2016). Exploring the relationship between transgender-inclusive providers and mental health outcomes among transgender/gender variant people. *Social Work Health Care*, 55(8), 635–650. <https://doi.org/10.1080/00981389.2016.1193099>
- King, B. M. (2022). The influence of social desirability on sexual behavior surveys: A review. *Archives of Sexual Behavior*, 1–7. <https://doi.org/10.1007/s10508-021-02197-0>
- López-Sáez, M. M., & Rodríguez, R. A. (2021). Gender-separate education in Spain: Reflections on educational rights and freedoms from a constitutional and human-rights perspective. *Lex Social: Revista de Derechos Sociales*, 11(2), 289–352.
- Mayor, A. (2020). *Tránsitos [Transition]*. Madrid: Bellaterra.
- Moral-Martos, A., Guerrero-Fernández, J., Gómez Balaguer, M., Rica Echevarría, I., Campos-Martorell, A., & Chueca-Guindulain, M. J. (2022). Guía clínica de atención a menores transexuales, transgéneros y de género diverso. *Anales de pediatría*, 96(4), 349.e1–349.e11. <https://doi.org/10.1016/j.anpedi.2022.02.002>
- Morrison, M. A., Bishop, C., Gazzola, S. B., McCutcheon, J. M., Parker, K., & Morrison, T. G. (2017). Systematic review of the psychometric properties of transphobia scales. *The International Journal of Transgender Identity*, 18(4), 395–410. <https://doi.org/10.1080/15532739.2017.1332535>
- Moyano, N., & Sánchez-Fuentes, M. (2020). Homophobic bullying at schools: A systematic review of research, prevalence, school-related predictors and consequences. *Aggression and Violent Behavior*, 53, Article 101441. <https://doi.org/10.1016/j.avb.2020.101441>
- Muñiz, J., & Fonseca-Pedrero, E. (2019). Diez pasos para la construcción de un test. [Ten steps for the construction of a test.]. *Psicothema*, 31, 7–16. <https://doi.org/10.7334/psicothema2018.291>
- Navarro-Mateu, D., Franco-Ochoa, J., Valero-Moreno, S., & Prado-Gascó, V. (2019). To be or not to be an inclusive teacher: Are empathy and social dominance relevant factors to positive attitudes towards inclusive education? *PLoS one*, 14(12), Article e0225993. <https://doi.org/10.1371/journal.pone.0225993>
- Norton, A. T., & Herek, G. M. (2013). Heterosexuals' attitudes toward transgender people: Findings from a national probability sample of U.S. adults. *Sex Roles: A Journal of Research*, 68, 738–753. <https://doi.org/10.1007/s11199-011-0110-6>
- O'Donoghue, K., & Guerin, S. (2017). Homophobic and transphobic bullying: Barriers and supports to school intervention. *Sex Education*, 17(2), 220–234. <https://doi.org/10.1080/14681811.2016.1267003>
- Olson, K. R., Durwood, L., DeMeules, M., & McLaughlin, K. A. (2016). Mental health of transgender children who are supported in their identities. *Pediatrics*, 137(3). <https://doi.org/10.1542/peds.2015-3223>
- Ozamiz-Etxebarria, N., Picaza, M., Jiménez-Etxebarria, E., & Cornelius-White, J. H. D. (2020). *Measuring discrimination against transgender people at the university of the basque country and in a non-university sample in Spain*. MDPI AG. <https://doi.org/10.3390/ijerph17072374>
- Platero, R. L., & López-Sáez, M. A. (2020). Support, cohabitation and burden perception correlations among LGBTQA+ youth in Spain in times of COVID-19. *Journal of Children Services*, 15(4), 221–228. <https://doi.org/10.1108/JCS-07-2020-0037>
- Rafferty, J. (2018). Committee on Psychosocial Aspects of Child and Family Health, Committee on Adolescence and Section on Lesbian, Gay Bisexual, and Transgender Health and Wellness. Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents. *Pediatrics*, 142(3), 162.
- Ruble, D. N., Taylor, L. J., Cyphers, L., Greulich, F. K., Lurye, L. E., & Shrout, P. E. (2007). The Role of Gender Constancy in Early Gender Development. *Child Development*, 78(4), 1121–1136. <https://doi.org/10.1111/j.1467-8624.2007.01056.x>
- Scandurra, C., Picariello, S., Valerio, P., & Amodeo, A. L. (2017). Sexism, homophobia and transphobia in a sample of Italian pre-service teachers: The role of socio-demographic features. *Journal of Education for Teaching*, 43(2), 245–261. <https://doi.org/10.1080/02607476.2017.1286794>
- Silveira, J. M., & Goff, S. C. (2016). Music Teachers' Attitudes Toward Transgender Students and Supportive School Practices. *Journal of Research in Music Education*, 62(2), 138–158. <https://doi.org/10.1177/0022429416647048>
- Spack, N. P., Edwards-Leeper, L., & Feldman, H. A. (2012). Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics*, 129(3), 418–425.
- Spanish National Institute. Retrieved from [https://www.ine.es/ss/Satellite?L=es\\_ES&c=INESeccion\\_C&cid=1259925481851&p=%5C&pagename=ProductosYServicios%2FPYSLayOut&param1=PYSDetalle&param3=1259924822888](https://www.ine.es/ss/Satellite?L=es_ES&c=INESeccion_C&cid=1259925481851&p=%5C&pagename=ProductosYServicios%2FPYSLayOut&param1=PYSDetalle&param3=1259924822888).
- Steensma, T. D., McGuire, J. K., Kreukels, B. P., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistance and persistence of childhood gender dysphoria: A quantitative follow-up study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(6), 582–590.
- Zucker, K. J. (2020). Reflections on the Relation Between Sex-Typed Behavior in Childhood and Sexual Orientation in Adulthood. *Childhood gender nonconformity and the development of adult homosexuality* (pp. 29–60). New York: Routledge.
- Zucker, K. J., & Lawrence, A. A. (2009). Epidemiology of gender identity disorder: Recommendations for the standards of care of The World Professional Association for Transgender Health. *International Journal of Transgender Identity*, 11(1), 8–18. <https://doi.org/10.1080/15532730902799946>
- Zucker, K. J., Mitchell, J. N., Bradley, S. J., Tkachuk, J., Cantor, J. M., & Allin, S. M. (2006). The Recalled Childhood Gender Identity/Gender Role Questionnaire: Psychometric Properties. *Sex roles*, 54(7–8), 469–483. <https://doi.org/10.1007/s11199-006-9019-x>