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Influence of news media use and political discussions on social self-efficacy through sense of unity: an analysis of mediation model invariance with Spanish and Portuguese adolescents

Vanesa Salado[1] · Tania Gaspar[2] · Concepción Moreno-Maldonado[3] · Margarida Gaspar de Matos[4] · Francisco Rivera[1]

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Abstract
Discussing sociopolitical issues with family or friends during adolescence, as well as staying informed through media outlets, is key to developing active civic engagement for both youth and future adults. Likewise, these communicative exchanges promote a sense of belonging and social skills which foster adolescents' wellbeing. This research aims to analyze the influence of participation in communication about political and social issues on adolescents' social self-efficacy, both directly and as well as indirectly through sense of unity, in two Mediterranean countries (Portugal and Spain). The sample was selected through random multistage sampling by conglomerates. The 36,992 adolescents (50.6% girls and 49.4% boys) participated in the *Health Behaviour in School-aged Children* (HBSC) study in Portugal and Spain, and the age groups were distributed as following: 39.6% 13–14-years-old; 35.8% 15–16-years-old; and 25.6% 17–18-years-old. Analyses showed positive associations between the proposed indicator of civic engagement –news media use and political discussions– and social self-efficacy, both directly as well as through sense of unity, with similar results for adolescents in Portugal and Spain. Accordingly, educational programs promoting communication about sociopolitical issues could foster adolescents' sense of unity and social skills, contributing to their positive development, wellbeing, and civic engagement. Curricular materials on current politics and social affairs could increase classroom dialogue based on respect, healthy peer relationships, and sense of belonging, fostering effective political socialization amongst youth and the development of democratic behaviors beneficial to society.

Keywords Adolescents · Sociopolitical communication · News media use · Social self-efficacy · Sense of unity

Introduction

News media use and participation in political discussion with family and friends –along with sociopolitical interest, internal political efficacy, civic self-efficacy, etc.– are all considered to be indicators of adolescent civic engagement (Schulz et al., 2010). Despite discrepancies in the definition of the term, the majority of research underscores how civic engagement fosters positive youth development (Lerner et al., 2005; Sherrod, 2007) and civic participation in adulthood (Chan et al., 2014; Jennings & Stoker, 2004). Studies have shown that adolescents who engage in sociopolitical debates with family and friends develop a higher sense of belonging (Anderson, 2009; Duke et al., 2009; Talò et al.,

✉ Concepción Moreno-Maldonado
moreno_c@us.es

Vanesa Salado
vsalado@us.es

Tania Gaspar
tania.gaspar.barra@gmail.com

Margarida Gaspar de Matos
margaridagaspar@netcabo.pt

Francisco Rivera
franciscorivera@us.es

[1] Department of Experimental Psychology, Universidad de Sevilla, C/Camilo José Cela, S/N, 41018 Seville, Spain

[2] Lusófona University, HEI-LAB Portugal, Lisbon, Portugal

[3] Department of Developmental and Educational Psychology, Universidad de Sevilla, C/Camilo José Cela, S/N, 41018 Seville, Spain

[4] Environmental Health Institute, Universidade de Lisboa, ISAMB/Lisbon University, Lisbon, Portugal

2014), increased social responsibility, and high self-efficacy (Richardson, 2003; Smetana et al., 2006). However, recent studies have voiced concern about low levels of youth social and political participation (Ribeiro et al., 2015),

In light of this, our principal research objective is to explore youth engagement in communication about political and social issues (discussions, information seeking) and news media use, and examine its predictive capacity on other important dimensions of adolescent development: sense of unity and perceived social competence (Boyd et al., 2011; Heiss et al., 2020). In addition, both inter- and intra-country analyses are conducted in two neighboring countries: Spain and Portugal. National research in both countries has found relationships between indicators of adolescent civic engagement and sense of belonging or sense of unity (Ribeiro et al., 2015; Salado et al., 2021), in addition to other variables related to social skills (Branquinho et al., 2022).

Sociopolitical communication with parents and friends and information seeking as indicators of adolescent civic engagement

Civic engagement is considered to be a complex and multifaceted phenomenon, containing certain problems in its conceptualization (Sherrod et al., 2010). There is a lack of consensus regarding what defines a civically engaged adolescent. Barret and Pachi (2019) offer two concepts to define civic engagement: civic participation (participative behaviors and actions benefitting the community) and psychological commitment (interests, opinions, values, and beliefs regarding political or social issues). Ekman and Amnå (2012) also differentiate between civic engagement –when youth are involved in individual or collective activities outside the political sphere– and political participation –such as voting, protesting, affiliation to political parties, etc. The present research adopts the definition by Schultz et al. (2010), and more specifically one of their indicators: *student engagement in communication about political and social issues*, which includes debates about sociopolitical issues with family and friends and seeking out information about these issues in newspapers, on the internet, or through national or international televised news.

> *Student self-beliefs* (interest, internal political efficacy, and citizenship self-efficacy): indicative of psychological involvement; *Student engagement in communication about political and social issues* (discussions, information seeking): indicative of individual civic engagement; *Student participation in civic activities outside of school:* reflects student involvement in collective civic engagement that is not part of the formal learning context; *Student participation in civic activities at their schools*: reflects student involvement in collective civic engagement that is related to education; and *Students' expected political participation in the future:* refers to behavioral intentions with regard to legal and illegal forms as well as individual (electoral) or collective (active political) forms of formal participation (p.115).

Adolescents' political interest is influenced by cognitive changes as well as new social experiences (Neundorf et al., 2013; Russo & Stattin, 2017). Likewise, social interest is the basis of future action and participation in society (Verba et al., 1995; Wanders et al., 2021).

Awareness about social problems, discussed within the nuclear family, with friends, or at school (Wanders et al., 2021) fosters the adolescents' sociopolitical interests (Shehata & Amnå, 2019). For example, research by Lee et al. (2012) demonstrated that youth who discuss public issues with peers and family members, as we as read and reflect upon news, have more interest in and knowledge about sociopolitical problems. Furthermore, communication skills are important for effective civic participation (Battistoni, 2000). An adolescent's communication skills –developed in interpersonal communication with other people through debating sociopolitical issues– constitute the foundation of their civic competence (McLeod et al., 2010; Shah et al., 2009). Accordingly, youth whose parents are interested in sociopolitical issues will have higher levels of civic knowledge (Schulz et al., 2010), and those who frequently discuss politics with a family member will have a higher probability of volunteering or voting as adults (Zukin et al., 2006). Communicating with parents about sociopolitical issues has been demonstrated to mediate between consumption of sociopolitical information and civic engagement (Boyd et al., 2011). Likewise, adolescents who discuss social problems with their classmates –expressing and listening to different opinions– have shown higher levels of civic knowledge and a higher probability of voting in the future (Torney-Purta et al., 2001).

Furthermore, discussing political issues with friends usually contributes to the youth's interest in politics (Dostie-Goulet, 2009). Similarly, López et al. (2006) observed that 15–25-year-old North Americans who regularly followed the news –either on television or through other means– had a higher probability of participating in political groups, voting, or addressing community problems. In addition, according to the IEA Civic Education Study conducted in 29 countries in 1999 and 2000 (Amadeo et al., 2004), expected adult voter participation in national elections was higher among 14–17-year-olds who frequently read the newspaper compared to those who did not.

Accordingly, awareness and understanding the aforementioned issues leads to long-lasting civic attitudes, values, and behaviors during adulthood, contributing to the development

of prosocial reasoning (Metzger & Smetana, 2010). Political socialization in different contexts throughout the youth's formative years will foster civic awareness and the development of their first political and social ideas (Neundorf & Smeets, 2017).

Along the same lines, Bandura (1986) highlighted the plasticity of the developmental process, citing systemic and probabilistic relationships between a developing organism and a changing context. The author encourages theories on personality development to consider an adolescent's social network and the changes and interactions between its members in order to better understand phenomena such as personality, cognition, or behavior. According to Hayden (2006), behaviors have an influence on and are influenced by value systems, social structures, governmental regulations, etc. Thus, adolescent civic engagement, in its different forms, is reinforced by developmental contexts and experiences (Eckstein et al., 2012; Kerestes et al., 2004; Shehata & Amnå, 2019; Stattin et al., 2023). Consequently, following the theory of social capital, the social connections and trust amongst people produced through these experiences will benefit both the individual as well as society (Field, 2008).

Therefore, social contexts exert an important influence on an adolescent's values and civic behavior (Silke et al., 2020). Moreover, given the demonstrated relevance of news media use and discussions about sociopolitical issues as indicators of active and engaged citizens, it leads us to explore whether this indicator can predict other variables of adolescent development such as sense of unity and social self-efficacy.

Adolescent engagement in communication about political and social issues (discussions, information seeking) as a predictor of social self-efficacy and sense of unity

As previously mentioned, indicators of civic engagement are related to aspects of adolescent development such as sense of belonging (Anderson, 2009; Duke et al., 2009; Talò et al., 2014) or self-efficacy (Richardson, 2003; Smetana et al., 2006). Likewise, positive development models consider the family, school, or friends to be assets that promote skills for healthy youth development (Benson et al., 2004; Oliva et al., 2010; Scales et al., 2000). This data highlights the importance of considering adolescent social and political communication in their contexts, as well as seeking out sociopolitical information, as predictors of variables such as social self-efficacy and sense of unity.

Civic self-efficacy is considered to be a predictor of adolescent participation in different types of civic activity in the future (Ainley & Schulz, 2011; Schulz et al., 2010), and political self-efficacy is associated with democratic school environments which are open to dialogue (Godfrey & Grayman, 2014; Levy, 2013; Manganelli et al., 2015). However, research conducted to date has not yet clarified the relationship between social self-efficacy, as a specific subdimension of the general self-efficacy scale proposed by Bandura et al. (1999) –understood as an individual's perception of their ability to develop healthy and supportive social relationships (Schunk & Pajares, 2009)– and student engagement in communication about political and social issues. In response to the lack of research on the relationship between these two variables, the authors believe that there could be a positive relationship between news media use and political discussions and social self-efficacy.

Similar to adolescents' political self-efficacy (believing in one's ability to influence political change)-developed through vicarious experiences and knowledge gained through conversation about political and social issues (Bandura, 2006), it is likely that political debate fosters an individual's perception of their ability to express opinions, relate appropriately with others, etc. Accordingly, the specific characteristics of the debate could foster a positive attitude towards one's own ability to participate (Zorn et al., 2006). In addition, certain aspects measured in social self-efficacy related to communication with others are also present in communicative self-efficacy, the latter understood as an individual's beliefs about their ability to express themselves using their own words, thoughts, and feelings (Koesten et al., 2002). For that matter, various studies confirm that discussing controversial issues can improve communicative self-efficacy (Klosterman & Sadler, 2010; Venville & Dawson, 2010).

Sense of unity is conceptualized as the positive feeling derived from forming part of a larger social structure that provides a common good (Larson, 2006; Samdal et al., 2016). Indicators such as seeking information or speaking about sociopolitical issues with family and friends can predict a sense of interdependence with others (Anderson, 2009; Duke et al., 2009; Talò et al., 2014). For example, an open style of communication with the family fosters the youth's connection to their family unit, and consequently, their connection with others (Boyd et al., 2011). Our research addresses sense of unity as a broader and psychological concept, examining beyond the connection and interdependence of specific contexts. According to the theory of social capital, youth with a stronger connection to and trust of others will develop more social responsibility as a means of maintaining their network of social connections (Wray-Lake & Syvertsen, 2011).

In addition to considering the independent associations of these variables with student engagement in communication about political and social issues, we believe it is important to explore the association between this indicator of civic engagement and social self-efficacy through sense of unity, given the current relevance of the latter in other research (Salado et al., 2021; Wahlström et al., 2021). Following

Smetana et al. (2006), adolescents who participate socially increase their interdependence with others, social responsibility, and the perception of self-efficacy. Lastly, we would like to explore this complex network of relationships according to country of origin.

The role of country in student engagement in communication about political and social issues, sense of unity, social self-efficacy, and the associations between them

Both Portugal and Spain foster sociopolitical participation in and out of school. For example, the *Dream Teens* project in Portugal aims to increase adolescents' social participation through a participative methodology of research-action (http://aventurasocial.com/). In Spain, the *Barómetro Opina* (Opinion Barometer) (https://www.barometro-opina.es/) aims to understand youths' concerns regarding national or international social and political issues. Furthermore, the *Ciudades Amigas de la Infancia* (Child-friendly Cities) program –sponsored by UNICEF (https://childfriendlycities.org/)– has been implemented in both Spain and Portugal, aiming to design effective policies in any city, town, community, or local government agency, to foster youth social participation and respect for their rights.

These projects and activities are indicative of these countries' consideration of the youth's opinions in order to improve their wellbeing and foster positive youth development (Baya, 2020), as well as promote different forms of adolescent civic engagement (Adler & Goggin, 2005). For example, youth participants of *Dream Teams* report a positive impact in their personal development, actions, relationships, and feeling of support (Branquinho et al., 2019).

Thus, it can be hypothesized that implementing these types of programs in both countries can help increase different forms of participation, such as that proposed in this study: seek sociopolitical information and participate in debates or discussions with family and friends regarding political and social issues, and simultaneously foster characteristics such as sense of unity and social self-efficacy. Torney-Purta (2002) summarized the analyses conducted in a study with 28 European countries about 14-year-old students' knowledge and civic skills. In this summary, Torney-Purta (2002) affirms that adolescents from Southern European countries show a high sense of self-efficacy and were considered capable of collaborating with their peers to resolve problems. Schools in these countries promoted student councils, ensured an open-classroom environment for discussing problems, and considered voting and elections to be important.

Likewise, perceiving similarity with others and feeling a sense of belonging to a stable and reliable society (Sarason, 1974) may serve as a catalyst for youth social participation (Cicognani & Zani, 2009). A Portuguese focus group study attributed low adolescent participation in civic and political issues to feeling generally excluded by adults, despite parents and media providing information and making them aware of social and political issues (Ribeiro et al., 2015). Accordingly, in a study conducted by Sloam (2016) comparing fifteen European countries it was found that Portuguese adolescents were less likely than their Spanish peers (as well as all other countries) to engage in active forms of social participation (such as strikes or protest, boycotts, etc.).

The main aim of this research is to analyze the influence of Spanish and Portuguese adolescent's participation in communication about sociopolitical issues on social self-efficacy, both directly as well as indirectly through the sense of unity, considering the country of origin. Each scale was examined according to sex, age, and country of origin. It was first hypothesized that there would be differences in the mean scores according to sex and age. The authors believe that boys will have higher scores than girls in civic engagement, but lower in sense of unity and social self-efficacy. In addition, it is hypothesized that age could be key to the development of these indicators, i.e., more civic engagement, sense of unity, and social self-efficacy as age increases. Likewise, the authors argue that the adolescents' dialogue at home or with peers will increase connections between members, generating a sense of unity which will in turn foster social self-efficacy. Likewise, it is believed that the quality of social and political communication will impact the adolescents' participation and will be generalized as a phenomenon for developing social and psychological instruments such as social self-efficacy and sense of unity. Lastly, given the similarities between the countries explored, the authors hypothesize that there will be no significant differences in the relationships established in the proposed model.

Method

Study design and participants

Population data comes from the 2017/18 edition of the *Health Behaviour School-aged Children* (HBSC) study, a WHO collaborative cross-national study which has collected data from 11–18-year-old adolescents every 4 years since 1983/1984. This research includes 36,992 adolescents 13–18-years old from Portugal (15.4%) and Spain (84.6%), with 18,715 (50.6%) girls and 18,277 (49.4%) boys (Matos & Equipa Aventura Social, 2018; Moreno et al., 2019). Participants were selected using stratified random multistage sampling by conglomerates and data was collected through an online questionnaire, answered anonymously by the adolescents during school hours. Data collection was carried out according to the standardized international protocol (Inchley et al., 2018) and ethical consent was granted by the competent institution of each country: the *Comité de Ética de Andalucía* (Andalusian

Bioethics Committee) in Spain, and the *X Comissão de Ética da Faculdade de Medicina da Universidade de Lisboa* (10th Ethics Committee of the Lisbon School of Medicine) in Portugal.

Instruments

The instrument used was the *Health Behaviour in School-aged Children* (HBSC) questionnaire (Inchley et al., 2018). This instrument has three types of questions: mandatory questions (included in all countries), optional questions (specific for different areas), and national questions according to each country's specific interests. For the present research, the following variables were selected from the optional "Positive health" optional package (Samdal et al., 2017), in addition to sex, age, and country:

- *Student engagement in communication about political and social issues* (SECPS) is one of the indicators used to define civic engagement proposed by Schulz et al. (2010) and measured through 7 items that asked, "How often are you involved in each of the following activities outside of school?", with four responses options (*Never or hardly ever; monthly; weekly; and daily or almost daily*). Some of the items were: "talking with your parent(s) about political or social issues", "watching television to inform yourself about national and international news", "talking with friends about political and social issues", etc. Flanagan et al. (2007) uses the 7 items on three different scales, calculating the reliability coefficient for each of them. Thus, item 1 is part of a scale called "Communication with parents about politics", with an alpha coefficient of .86; item 4 is part of the "Communication with friends about politics" scale with an internal consistency of .86; and items 2, 3 and 5 are part of the "Overall media consumption" scale along with other items, with a Cronbach alpha of .81. For items 6 and 7, no validation studies have been found. The present study combines all the items on a single scale with an internal consistency of .85.
- *Social self-efficacy* (SSE) is an 8-item subscale inspired by the self-efficacy scale developed by Muris (2001). Some of the items were "How well can you express your opinions when other classmates disagree with you?", "How well can you tell other children that they are doing something that you don't like?", "How well do you succeed in preventing quarrels with other children?", etc. The response options oscillated between 1 (*not at all*) and 5 (*very well*). The Cronbach alpha of the original sub-scale was .85 (Muris, 2001). In this study, the Cronbach alpha was .86.
- *Sense of unity* (SU) was evaluated through an 8-item measure developed by SALUD project (Stimulating Adolescent Life Skills Through Unity and Drive) and included in the HBSC study (Samdal et al., 2017). Some of the items were: "I feel that I contribute without expecting anything in return", "I feel that I mean a lot to others", "I feel that others mean a lot to me", etc. This scale has been used in other research with alpha values between .76 and .89 (Salado et al., 2021; Samdal et al., 2016; Wahlström et al., 2021). The Cronbach alpha coefficient for this study was .90, showing adequate internal consistency.

Data analysis

Firstly, descriptive statistics were used for the three variables, including the mean and standard deviation. Secondly, Student *t* test, ANOVA test and Tukey HSD test was employed to examine mean differences in the examined variables across sex, age and country of origin. Effect size was estimated using Cohen's *d*, considering values around .40 as small effect, values between .50 to .70 as intermediate effect, and values equal to or higher than .80 as strong or large effect (Cohen, 1988). In addition, Pearson's correlations were calculated to examine the associations between the studied variables.

Thirdly, the influence of SECPS on SSE through SU was analyzed in a structural equation model with unweighted least squares (ULS). Model fit was evaluated using different adjustment indices: Chi-square ($\chi 2$), –its value should not be significant, although Cheung and Rensvold (2002) argue that sample size can influence its value–; Comparative Fit Index (CFI), with values above .90 considered acceptable; Root Mean Square Error of Approximation (RMSEA); and Standardized Root Mean Squared Residual (SRMR). For RMSA and SRMR values near or below .08 and .05 are considered indicators of acceptable model fit, respectively. The intensity of the direct and indirect effects were examined considering the standardized coefficients and their effect sizes. Following Peterson and Brown (2005), the standardized β coefficients were transformed into r and this indicator into eta-square ($\eta 2$), following the procedure of Dunlap (1994). The eta-square values were interpreted as follows: small effect for values around .05, moderate effect for values from 0.06 to 0.11, and a large effect when the values were equal to or greater than .14 (Cohen, 1988).

Lastly, configurational invariance analysis was performed by country of origin and without parameter restrictions. An increase of .01 in CFI was considered to be an indicator of significant change in the model by country (Cheung & Rensvold, 2002). In addition, Fisher's Z test was employed to examine significant differences in the indicators by country. Only significant differences are reported.

IBM SPSS Statistics 22 was employed for descriptive statistics, correlations and mean comparison, and JASP 0.14.1 based on R, was used for the model of structural equations and invariance analysis.

Table 1 Descriptives, mean comparisons between Spain and Portugal and measure of effect size

		Descriptive statistics						Significance tests and Effect size
		Total		Spain		Portugal		
		$\overline{x}$	*SD*	$\overline{x}$	*SD*	$\overline{x}$	*SD*	
SECPS	Total	14.50	5.30	14.25	5.10	15.60	5.95	$t_{(21447)} = -14.65$, $p < .001$; $d = .25$
Sex	Boys	14.71	5.47	14.56	5.34	15.38	6.01	F (3,21445) = 2607.80; $p < .001$; $d = .23$
								Tukey HSD test
	Girls	14.31	5.12	13.94	4.84	15.77	5.89	Spanish boys – Spanish girls: $p_{tukey} < .001$; $d = .12$
								Spanish boys – Portuguese boys: $p_{tukey} < .001$; $d = .15$
								Spanish boys – Portuguese girls: $p_{tukey} < .001$; $d = .22$
								Spanish girls – Portuguese boys: $p_{tukey} < .001$; $d = .28$
								Spanish girls – Portuguese girls: $p_{tukey} < .001$; $d = .36$
								Portuguese boys – Portuguese girls: $p_{tukey} = .092$; $d = .06$
Age								F (5,21443) = 3822,42; $p < .001$; $d = .36$
								Tukey HSD test
	13−14	13.75	5.22	13.48	4.91	14.86	6.18	$^{13\text{-}14}$ Spanish – $^{15\text{-}16}$ Spanish: $p_{tukey} < .001$; $d = .14$
								$^{13\text{-}14}$ Spanish – $^{17\text{-}18}$ Spanish: $p_{tukey} < .001$; $d = .39$
								$^{13\text{-}14}$ Spanish – $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .26$
								$^{13\text{-}14}$ Spanish – $^{15\text{-}16}$ Portuguese: $p_{tukey} < .001$; $d = .39$
	15−16	14.41	5.17	14.19	5.01	15.50	5.75	$^{13\text{-}14}$ Spanish – $^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .66$
								$^{15\text{-}16}$ Spanish – $^{17\text{-}18}$ Spanish: $p_{tukey} < .001$; $d = .25$
								$^{15\text{-}16}$ Spanish - $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .13$
								$^{15\text{-}16}$ Spanish - $^{15\text{-}16}$ Portuguese: $p_{tukey} < .001$; $d = .25$
	17−18	15.75	5.38	15.49	5.28	16.81	5.64	$^{15\text{-}16}$ Spanish - $^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .51$
								$^{17\text{-}18}$ Spanish – $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .11$
								$^{17\text{-}18}$ Spanish - $^{15\text{-}16}$ Portuguese: $p_{tukey} > .999$; $d = .00$
								$^{17\text{-}18}$ Spanish - $^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .25$
								$^{13\text{-}14}$ Portuguese -$^{15\text{-}16}$ Portuguese: $p_{tukey} = .013$; $d = .11$
								$^{13\text{-}14}$ Portuguese –$^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .33$
								$^{15\text{-}16}$ Portuguese -$^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .23$
SSE	Total	29.79	6.17	30.28	5.51	27.24	7.94	$t_{(20689)} = 29.24$, $p = <.001$; $d = .50$
Sex	Boys	29.74	6.38	30.34	5.60	26.93	8.68	F (3,20687) = 287.79; $p < .001$; $d = .41$
								Tukey HSD test
	Girls	29.84	5.97	30.43	5.43	27.49	7.29	Spanish boys – Spanish girls: $p_{tukey} = .733$; $d = .01$
								Spanish boys – Portuguese boys: $p_{tukey} < .001$; $d = .54$
								Spanish boys – Portuguese girls: $p_{tukey} < .001$; $d = .47$
								Spanish girls – Portuguese boys: $p_{tukey} < .001$; $d = .57$
								Spanish girls – Portuguese girls: $p_{tukey} < .001$; $d = .50$
								Portuguese boys – Portuguese girls: $p_{tukey} = .025$; $d = .07$
Age	13−14	29.71	6.59	30.53	5.64	26.48	8.75	F (5,20685) = 180.66; $p < .001$; $d = .42$
								Tukey HSD test
								$^{13\text{-}14}$ Spanish – $^{15\text{-}16}$ Spanish: $p_{tukey} = .030$; $d = .04$
								$^{13\text{-}14}$ Spanish – $^{17\text{-}18}$ Spanish: $p_{tukey} = .453$; $d = .04$
								$^{13\text{-}14}$ Spanish – $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .63$
								$^{13\text{-}14}$ Spanish – $^{15\text{-}16}$ Portuguese: $p_{tukey} < .001$; $d = .49$
	15−16	29.84	5.95	30.30	5.44	27.56	7.63	$^{13\text{-}14}$ Spanish – $^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .44$
								$^{15\text{-}16}$ Spanish – $^{17\text{-}18}$ Spanish: $p_{tukey} > .999$; $d = .00$
								$^{15\text{-}16}$ Spanish - $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .61$
								$^{15\text{-}16}$ Spanish - $^{15\text{-}16}$ Portuguese: $p_{tukey} < .001$; $d = .46$
								$^{15\text{-}16}$ Spanish - $^{17\text{-}18}$ Portuguese: $p_{tukey} < .001$; $d = .41$
								$^{17\text{-}18}$ Spanish – $^{13\text{-}14}$ Portuguese: $p_{tukey} < .001$; $d = .59$

Table 1 (continued)

		Descriptive statistics						Significance tests and Effect size
		Total		Spain		Portugal		
		$\bar{x}$	*SD*	$\bar{x}$	*SD*	$\bar{x}$	*SD*	
SECPS	Total	14.50	5.30	14.25	5.10	15.60	5.95	$t_{(21447)} = -14.65$, $p < .001$; $d = .25$
	17–18	29.84	5.84	30.31	5.44	27.94	6.94	$^{17-18}$ Spanish - $^{15-16}$ Portuguese: $p_{tukey} < .001$; $d = .46$
								$^{17-18}$ Spanish - $^{17-18}$ Portuguese: $p_{tukey} < .001$; $d = .41$
								$^{13-14}$ Portuguese - $^{15-16}$ Portuguese: $p_{tukey} < .001$; $d = .13$
								$^{13-14}$ Portuguese – $^{17-18}$ Portuguese: $p_{tukey} < .001$; $d = .18$
								$^{15-16}$ Portuguese - $^{17-18}$ Portuguese: $p_{tukey} = .656$; $d = .05$
SU	Total	28.53	7.08	29.18	6.46	25.71	8.79	$t_{(20830)} = 28.13$, $p = <.001$; $d = .50$
Sex	Boys	28.44	7.41	29.18	6.73	24.88	9.26	F (3,20828) = 279.22; $p < .001$; $d = .43$
								Tukey HSD test
	Girls	28.63	6.77	29.19	6.18	26.38	8.34	Spanish boys – Spanish girls: $p_{tukey} < .999$; $d = .00$
								Spanish boys – Portuguese boys: $p_{tukey} < .001$; $d = .59$
								Spanish boys – Portuguese girls: $p_{tukey} < .001$; $d = .39$
								Spanish girls – Portuguese boys: $p_{tukey} < .001$; $d = .63$
								Spanish girls – Portuguese girls: $p_{tukey} < .001$; $d = .42$
								Portuguese boys – Portuguese girls: $p_{tukey} < .001$; $d = .17$
Age	13–14	28.91	7.56	29.84	6.71	25.10	9.43	F (5,20826) = 181.19; $p < .001$; $d = .42$
								Tukey HSD test
								$^{13-14}$ Spanish – $^{15-16}$ Spanish: $p_{tukey} < .001$; $d = .15$
								$^{13-14}$ Spanish – $^{17-18}$ Spanish: $p_{tukey} < .001$; $d = .17$
								$^{13-14}$ Spanish – $^{13-14}$ Portuguese: $p_{tukey} < .001$; $d = .65$
								$^{13-14}$ Spanish – $^{15-16}$ Portuguese: $p_{tukey} < .001$; $d = .55$
	15–16	28.35	6.87	28.84	6.34	25.97	8.64	$^{13-14}$ Spanish – $^{17-18}$ Portuguese: $p_{tukey} = .989$; $d = .52$
								$^{15-16}$ Spanish – $^{17-18}$ Spanish: $p_{tukey} < .001$; $d = .01$
								$^{15-16}$ Spanish - $^{13-14}$ Portuguese: $p_{tukey} < .001$; $d = .53$
								$^{15-16}$ Spanish - $^{15-16}$ Portuguese: $p_{tukey} < .001$; $d = .42$
								$^{15-16}$ Spanish - $^{17-18}$ Portuguese: $p_{tukey} < .001$; $d = .39$
								$^{17-18}$ Spanish – $^{13-14}$ Portuguese: $p_{tukey} < .001$; $d = .51$
	17–18	28.26	6.64	28.75	9.43	26.28	7.93	$^{17-18}$ Spanish - $^{15-16}$ Portuguese: $p_{tukey} < .001$; $d = .41$
								$^{17-18}$ Spanish - $^{17-18}$ Portuguese: $p_{tukey} < .001$; $d = .38$
								$^{13-14}$ Portuguese - $^{15-16}$ Portuguese: $p_{tukey} = .011$; $d = .09$
								$^{13-14}$ Portuguese – $^{17-18}$ Portuguese: $p_{tukey} < .001$; $d = .14$
								$^{15-16}$ Portuguese - $^{17-18}$ Portuguese: $p_{tukey} = .898$; $d = .04$

Note: Data from the HBSC study in Spain and Portugal (2018 edition). Own elaboration. *SECPS*, Student engagement in communication about political and social issues; *SSE*, Social self-efficacy; *SU*, Sense of unity; $\bar{x}$, Means; *SD*, standard deviation; *t*, student *t; F,* Anova test*; d,* Cohen's d

Results

Descriptive statistics and correlations

Table 1 presents the descriptive statistics, including mean and standard deviation values for continuous variables, as well as the results of the means comparisons by sex, age, and country. As shown in Table 1, Student's *t* results showed significant differences across countries. Portuguese adolescents showed higher SECPS scores with small effect size, while Spanish adolescents showed higher SSE and SU with intermediate effect size. Regarding sex differences, boys have higher scores than girls in SECPS in both the global sample and in Spain, however these differences were not observed in Portugal. Concerning SSE and SU, girls scored higher than boys in the global score, but no sex differences were identified in SSE and SU when comparing Spanish boys and girls. Analysis by age showed that as age increases so does SECPS –as well as a slight increase in SSE– both in the global sample and by country. However, there are no significant differences between Spanish 17–18-year-olds and the other two age groups, and between Portuguese 17–18 and 15–16-year-olds. Lastly, SU is higher in 13–14-year-old boys, with significant differences compared to the other groups in both the global sample and in Portugal. However, 17–18-year-old Portuguese youth have higher SU than the

Table 2 Goodness-of-fit indices for the proposed factorial model and the configurational invariance analysis

	Global	Country
χ^2/df[a]	53.86	32.63
NNFI[b]	.980	.977
CFI[c]	.982	.979
IFI[d]	.982	.979
RMSA[e] (CI 95%)[f]	.054	.059
SRMS[g]	.041	.047
∇ CFI[h]	-	.003

Data from the HBSC study in Spain and Portugal (2018 edition). Own elaboration. χ^2/df, [a]Chi-square/degree of freedom; [b]NNFI, Non-Normed Fit Index; [c]CFI, Comparative Fit Index; [d]IFI, Incremental Fit Index; [e]RMSA, Root Mean Squared Error; [f]CI, confidence interval; [g]SRMR, Standardized Root Mean Squared Residual; [h] ∇ CFI, Decrease in CFI

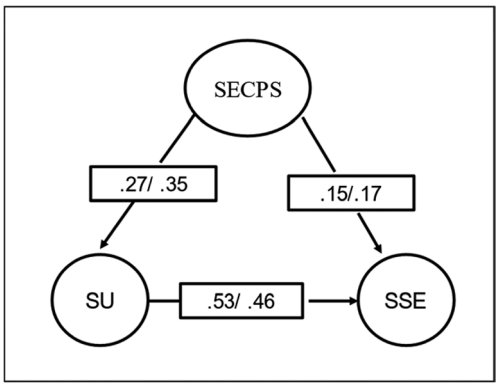

Fig. 2 Standardized solution of the final model across the different groups by country. The data is presented as Spain/Portugal. Note: Data from the HBSC study in Spain and Portugal (2018 edition). Own elaboration. SECPS, Student engagement in communication about political and social issues; SSE, Social self-efficacy; SU, Sense of unity

rest of the groups, despite no significant differences between 15–16 and 17–18-year-old Portuguese youth.

Lastly, Pearson's correlation coefficient values showed that SSE and SU have positive and significant relationships ($p < 0.05$) with SECPS scores, with a low intensity. In addition, SSE and SU are positively associated, with moderate intensity.

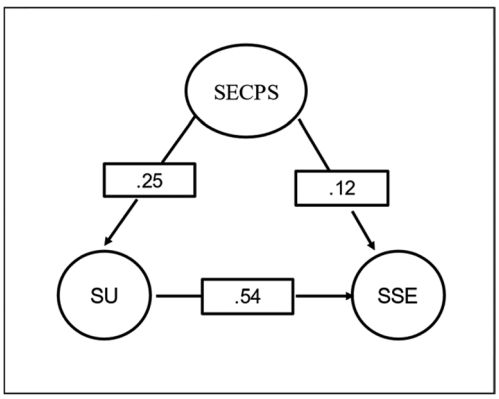

Fig. 1 Representation of the standardized estimations of the path coefficients of the global model. Note: Data from the HBSC study in Spain and Portugal (2018 edition). Own elaboration. SECPS, Student engagement in communication about political and social issues; SSE, Social self-efficacy; SU, Sense of unity

Testing a mediation model of the influence of student engagement in communication about political and social issues on social self-efficacy through sense of unity and invariance across countries

As presented in Table 2, goodness of fit indices for the hypothesized mediation model showed excellent data fit (CFI = .980; RMSEA = .054; SRMR = .041) despite Chi-square being significant ($\chi 2 = 12{,}226.710$; $p < .001$).

Figure 1 presents the standardized coefficients of the global model estimating the direct association between SECPS and SSE, as well as the indirect effects of SECPS on SEE through SU. The model explained 34.2% of the variance of SSE and 6.2% of the variance of SU. The direct path from SECPS to SSE showed low and significant factor loading ($\beta = .12$; $\eta 2 = .02$) Likewise, mediation effects suggested that the effect of SECPS on SEE through SU operates significantly and with low intensity ($\beta = .13$; $\eta 2 = .03$). In both cases, the effect size was small. However, the directs effects of SECPS on SU ($\beta = .25$; $\eta 2 = .09$) and of SU on SEE ($\beta = .54$; $\eta 2 = .30$) showed greater intensity, with intermediate and large effect sizes.

Configurational invariance analyses were performed with samples segmented by country. Figure 2 presents the standardized coefficients for Spain and Portugal. The models explained 34.1% (for Spain) and 29.0% (for Portugal) of SEE, and 7.2%% (for Spain) and 12.4% (for Portugal) of SU. The configurational invariance model fit was excellent for country (CFI = .979; RMSEA = .059; SRMR = .047) with a .003 decrease in CFI (values must be below .01 in order to consider invariance).

In addition, small variations in the standardized coefficients were examined using Fisher's Z, showing that changes were not significant ($p < .05$), except in the association between SECPS and SU which was significantly more intense in Portugal ($Z = -6.16$, $p < .001$) and between SU and SEE which was significantly greater in Spain ($Z = 6.45$, $p < .001$). However, these results only show relationship strength, without affecting the rest of the indicators that reveal the model's configurational invariance across the country.

Discussion

The main objective of this research was to analyze whether adequate socio-political and informative communication influences social self-efficacy –either directly or through sense of unity– promoted by the interactions with others, in a representative sample of adolescents residing in Portugal and Spain. Consistent with previous findings, results showed that establishing debates with family and friends is associated with youth self-efficacy (Richardson, 2003) and promotes a recognized interdependence with others (Talò et al., 2014). Likewise, the influence of sociopolitical debate with family and friends on sense of unity, as observed in this research, has been confirmed by other studies which highlight the importance of political debate at home for reinforcing active civic engagement in the future (Hooghe & Stiers, 2022).

Prior to examining the relationships in the proposed model, each of the variables was explored individually and according to different sociodemographic variables. Thus, results showed country differences in the scores of the three variables (communication about politics and social issues with family, friends, and media; social self-efficacy, and sense of unity). Regarding social media and political communication, Portuguese adolescents scored higher in engagement in communication about political and social issues than their Spanish peers. These results contrast with other research. For example, Magalhães and Moral (2008) characterized Portuguese youth as having low exposure to political information and therefore lower levels of political knowledge due to their notorious discontent with the functioning of their democratic system. In another study, Sloam (2016) compared five forms of political participation –voting in national elections, displaying a badge, signing a petition, joining a boycott, and participating in a demonstration– across fifteen European countries. Results showed Portuguese adolescents participating at comparatively lower levels than Spaniards, as well as presenting lower participation than adolescents from the other countries such as Sweden and France or those that are part of continental European democracies such as Germany, Belgium, Austria, and Luxembourg. In this sense, and considering our results, it is possible that countries 'specialize' in certain forms of participation according to their cultural or social characteristics, with Portuguese youth exercising more passive forms of socio-political participation such as social and political debates and searching for information. This coincides with Menezes et al. (2005), who found in the International Study of Civic Education (*Estudo Internacional sobre Educação Cívica*) that Portuguese youth –compared to other European youth– engaged more in passive-conventional or social activities such as the tendency to discuss politics mainly with parents and very rarely with teachers.

Secondly, and regarding social self-efficacy and sense of unity, Spanish adolescents showed higher scores than their Portuguese peers. These results must be interpreted with caution due to the lack of prior studies comparing the two countries in this subdimension of general self-efficacy by Bandura et al. (1999), nor with the new dimension proposed by Samdal et al. (2016): sense of unity. In fact, previous research conducted by Verdugo et al. (2018) using the general self-efficacy scale of Bandura et al. (1999) have found no differences between Spanish and Portuguese adolescents. Likewise, research about the social skills of native and immigrant adolescents from Spain and Portugal found high mean scores in both groups and in both countries (Romero-Oliva et al., 2017). On the other hand, Spain and Portugal are considered to be two very culturally similar countries (Instituto de Política Familiar, 2014; Inchley et al., 2016; Pommier et al., 2010), in which their citizens function interdependently and synchronously in relation to other members (Rokach & Nieto, 2000). Therefore, as the 2012 Report on Youth in Spain (Moreno & Rodríguez 2013) points out, we can hypothesize that Spanish youth tend to have a more-positive self-evaluation than their peers in other European countries.

Analyses by country, sex, and age produced interesting results. When asked if they participated in sociopolitical discussions with family and friends, or if they would seek out sociopolitical information in the media, Spanish boys scored higher than girls. This data coincides with prior research on civic engagement and gender, reporting that boys are more interested in following news or have a higher intention of voting in the future (Wray-Lake et al., 2020) and that girls are more interested in volunteering (Gaby, 2017).

Sex differences in sense of unity and social self-efficacy were also found in favor of girls, except when comparing Spanish youth. Research focusing on these variables have shown discrepancies. It seems that girls have higher social self-efficacy than boys at a younger age (Coleman, 2003), however these differences dissipate as they get older (Bacchini & Magliulo, 2003; Gaudiano & Herbert, 2007). Little research has been conducted about sense of unity, as it is a relatively new construct. However, a study by Wahlström et al. (2021) found no sex differences in a sample of Swedish adolescents.

From a developmental perspective, the results showed an increase in civic engagement as the youth aged. Older adolescents have higher levels of political interest due to the frequency of political debates with peers and family (Shehata & Amnå, 2019). In addition, the development of cognitive skills affords them more complex thoughts and reasoning regarding different issues (Neundorf et al., 2013; Wray-Lake & Syvertsen, 2011). Likewise, country comparison of social self-efficacy produced significant results at a later age, however not within countries. This contrasts with sense of unity, which showed higher scores for younger adolescents in both countries, although without significant differences between 15–16 and 17–18-year-old Portuguese adolescents.

Data fit to the hypothesized structural model suggested that student engagement in communication about political and social issues influences adolescents' social self-efficacy, both directly and indirectly through sense of unity. According to Russo and Stattin (2017), young people interested in social and political issues are more likely to participate in debates with family members, stimulate their civic interest with friends, and seek out relevant sociopolitical information from the media in order to stay connected. Therefore, the need to relate to others through these debates, feel connected with them, and share the same social and political interests will promote a greater affinity to these groups, providing learning experiences which increase the youth's perceived social competence. Research by Oosterhoff et al. (2021) supports these results, demonstrating that social connection between peers fosters civic engagement, and conversely, this civic engagement cultivates social connection. Despite country differences, the structural model demonstrated invariance, thus confirming similar relationships between the variables in both countries. However, slight differences were found. Firstly, a stronger association between student engagement in communication about political and social issues and sense of unity was found for Portuguese adolescents. This may be due to the fact that, although Spain and Portugal are culturally similar, Portuguese society has for centuries been considered to be a stable structure where the extended family and kinship relations are of great importance and based on mutual obligations (Solsten, 1994; Rokach & Neto, 2000). In this sense, it is possible that communication between Portuguese adolescents' family members creates stronger bonds of union and interdependence than in the case of Spanish adolescents. Secondly, the relationship between sense of unity and social self-efficacy was stronger for Spanish adolescents. This result suggests that feelings of similarity and togetherness with others generates a greater social self-competence in Spanish than in Portuguese adolescents, promoting a more positive perception of their abilities to establish satisfactory and healthy social relationships. As has been stated since the first Eurobarometer surveys between 1982 and 1990 (European Commission, 1991) and in previous research (Bendit, 2000), Portuguese youth show low attendance to associations or participation in organizations where they can develop social skills or abilities. It is possible that this decrease in social contacts influences the lower intensity of their feelings of belonging to a broader social structure and, therefore, decreasing opportunities to develop higher social self-efficacy.

Despite the mentioned differences in the intensity of some associations, the model representing the direct effect of communication about social and political issues on social self-efficacy and its indirect effect through sense of unity demonstrated to be adequate in both countries, as confirmed by the fit indices. Portugal and Spain are two countries that share similar cultural and historical traits as well as educational policies for social participation (Ferreira et al., 2013; Ribeiro et al., 2012), thus, it is not surprising that the development of adequate social skills is promoted by both sociopolitical debates established in social relations and the feelings of belonging to these social groups, reinforced by those interactions.

The research findings highlight developmental contexts and media as principal agents of adolescent political socialization. The ties between members of each context foster the youth's development of adequate social self-efficacy and relationships beneficial to others. Thus, this study contributes from a theoretical standpoint to the existing literature on adolescent civic engagement, emphasizing its importance for the youth's individual and social development. In addition, family, school, and friends are fundamental for fostering critical thinking and social commitment in adolescents. Likewise, from a macrosystemic perspective, educational and governmental policies aimed at promoting positive social skills amongst youth as well as a healthy adolescent social and political participation are necessary. This requires that procedures be promoted from within the political and public sphere towards news media and formal education, as mentioned later in the strengths of the study. Therefore, the theoretical, practical, and social implications of this research can be summarized in one fundamental aspect: understanding the influence of youth sociopolitical communication in their developmental contexts and the use of media contribute to developing adequate political, educational, and social measures based on improving individual and social wellbeing.

Finally, some limitations should be considered when interpreting the results of this study. Among them, the inability to establish causal relationships due to the cross-sectional research design and the self-reported assessment

of the participants. In addition, the novelty of the concept *sense of unity* made it difficult to contrast our findings due to the lack of research comparing this construct in Spain and Portugal. Similarly, this research focused on the social subdimension of the general scale of self-efficacy proposed by Bandura et al. (1999) whereas most of the previous studies explore the general score. On the other hand, some strengths should also be highlighted. For example, the large sample size, the use of valid instruments to assess the different constructs, and the comparison between two Mediterranean countries. Although causation could not be established, one strength of the mediation analyses used is that the inference of the relationships between variables offers a more complete view of the data. Furthermore, this research contributes to understanding how to generate social and political interest, knowledge, and participation in democratic societies by exploring the influence of news media use and political discussions on sense of unity, and through it, on adolescents' social self-efficacy. These findings suggest the benefits of implementing educational policies and practices that reinforce news media use and communication through debates with family and friends about sociopolitical issues. For example, school curricula could include information about national and international social and political issues provoking classroom discussion and debate. This dialogue could foster the adolescents' sociopolitical interest and concerns, and be complemented by other civic activities such as denouncing and advocating against inequalities and injustices on social media, collaborate with human rights associations, etc. These programs should foster critical thinking and socially active citizens, which may in turn contribute to increasing a sense of belonging and to developing adequate social skills. Future research could examine the impact of these educational interventions on the future behavior of the youth as adults. Conducting longitudinal studies may help to better understand if the relationships established in this study change with age and if interventions have generated more civic engagement in different social and political areas.

Conclusions

Despite studying different aspects and dimensions of civic engagement, researchers have yet to arrive to a common definition (Sherrod et al., 2010). However, it has been found that participating in discussions about political and social issues, as well as seeking information and news in social media is a good predictor of civic knowledge and political interest (Schulz et al., 2010), both factors key for the development of civic engagement.

During adolescence, adequate social engagement and participation in actions for the benefit of others is necessary and effective for the youth's positive development (Lerner et al., 2005; Sherrod, 2007). In this sense, this research has highlighted the importance of young people's interactions in sociopolitical debates with family and friends and seeking out information to adequately develop their social skills, as well as for the feelings of unity and the recognition of interdependence with others. In addition, despite slight differences in some associations between variables, it has been found that the development of both Portuguese and Spaniards' civic commitment fosters a positive sense of unity and social self-efficacy. Lastly, school interventions promoting classroom debates among peers on current and past, national and international, political and social issues, as well as programs that promote political-social dialogue between family members and children, contribute to developing greater and more effective citizen engagement and developing social skills among adolescents and future adults. Therefore, these are favorable contexts for promoting skills for youth citizen-participation –in terms of social sustainability–, fostering greater solidarity and inter-generational respect. It has been demonstrated that adolescents equipped with skills and offered opportunities to participate in their society become more capable of solving problems and being agents of change (Pazmiño Segovia, 2015).

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