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Validation of a computerized version of Harter's Social Support Scale in preadolescents and adolescents

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Abstract

The aim was to adapt Harter's Social Support Scale into a computerized format and validate it in a sample of preadolescents and adolescents. A total of 654 students (9-17 years old) from schools in Galicia (Spain) participated. The adapted version features a Likert response scale and adjustments to reflect diverse family structures, thanks to its computerized format. Confirmatory factor analysis showed that, among the models tested, the one composed of four interrelated factors (Perceived Social Support from Parents, Peers, Teachers, and Close Friends) provided the best fit to the data. Nonetheless, the hierarchical model with a general perceived social support factor also showed a good fit. The scores obtained for each factor demonstrated high internal consistency. The negative correlations found between the scores on the four social support dimensions and victimization in face-to-face bullying support the criterion validity of the instrument. The tool is particularly relevant for assessing perceived social support and identifying psychosocial needs during key transitions, such as from childhood to adolescence, when issues like bullying frequently arise.
Keywords: supportive relationships, instrument, evaluation, child and adolescent population, school bullying.

Resumen

Validación de una versión informatizada de la Escala de Apoyo Social de Harter en preadolescentes y adolescentes. El objetivo fue adaptar la Escala de Apoyo Social de Harter a un formato informatizado y validarla en una muestra de preadolescentes y adolescentes. Participaron 654 estudiantes de 9 a 17 años de Galicia (España). La versión adaptada incluye una escala de respuesta tipo Likert y ajustes para reflejar la diversidad familiar, gracias a su formato informatizado. El análisis factorial confirmatorio mostró que, de los modelos puestos a prueba, el que mejor ajustó a los datos fue el compuesto por cuatro factores interrelacionados (Apoyo Social Percibido de Padres, Compañeros/as, Profesores/as y Amigos/as Íntimos/as). No obstante, el modelo jerárquico con un factor general de apoyo social percibido también mostró un buen ajuste. Las puntuaciones obtenidas en cada factor presentaron una alta consistencia interna. Las correlaciones negativas halladas entre las puntuaciones en las cuatro dimensiones de apoyo social y la victimización en acoso escolar presencial respaldan la validez de criterio de la prueba. Su aplicación puede resultar especialmente útil para evaluar el apoyo social percibido y detectar necesidades psicosociales en etapas críticas como la transición de la infancia a la adolescencia, donde emergen problemáticas como el acoso escolar.
Palabras clave: relaciones de apoyo, instrumento, evaluación, población infantojuvenil, acoso escolar.

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Highlights

- The scale adapts to diverse family structures via computerized format.
- It confirms a structure with four specific, interrelated sources of social support.
- Shows high internal consistency and strong psychometric validity.
- Perceived social support is inversely related to offline bullying victimization.
- Facilitates social support assessment during key transitions such as childhood to adolescence.

Puntos clave

- La escala se adapta a la diversidad familiar gracias a su versión informatizada.
- Confirma una estructura de cuatro fuentes específicas de apoyo social, interrelacionadas.
- Presenta alta consistencia interna y validez psicométrica adecuada.
- El apoyo social percibido se relaciona negativamente con la victimización en acoso escolar presencial.
- Facilita la evaluación del apoyo social en momentos clave como la transición de la infancia a la adolescencia.

It is acknowledged that the transition from childhood to adolescence involves profound physical, psychological, and social changes (Mastorci et al., 2024). These transformations represent a significant source of stress for many young people (Papalia & Martorell, 2024). Fortunately, stress in humans is mitigated when there are people who listen to us, care for us, and value us; that is, when we have social support (Pei et al., 2023; Vila, 2021).

Social support—broadly defined as the belief that one is cared for, valued, and belongs to a network of affectionate relationships—is recognized as a robust protective factor for youth mental health (Bauer et al., 2021; Liu et al., 2021; Zhou & Cheng, 2022). In the literature, a distinction is made between perceived support (the subjective sense that help is available) and received support (the actual assistance provided) (Rodríguez-Fernández et al., 2021).

It has been demonstrated, through meta-analytic evidence in children and adolescents, that perceived support appears to be more strongly and consistently linked to lower depression and anxiety and higher life satisfaction than received support (Zell & Stockus, 2025).

Moreover, meta-analytic evidence indicates that lower levels of perceived support predict higher rates of bullying and cybervictimization and that higher support buffers their emotional consequences—such as increased anxiety and lowered self-esteem (Álvarez-García et al., 2025; Castaño-Pulgarín et al., 2022; Zych et al., 2019). These findings underscore the importance of perceived social support for preventing harassment and mitigating its emotional impact, which in turn justifies the use of a validated cybervictimization questionnaire to establish the criterion validity of the social support scale under development (Rodríguez-Enríquez, Álvarez-García, Ares-Ferreirós & Garaigordobil, 2025).

Four primary sources of social support are distinguished in the literature: family, teachers, classmates, and close friends (Castaño-Pulgarín et al., 2022; Liu et al., 2023). The family is the primary source of care and moral guidance (Chan et al., 2022; Michaelson et al., 2021), maintaining its influence throughout development (De Meulenaere et al., 2022; Rawatlal et al., 2015). Teachers not only play an academic role but also serve as figures of socio-emotional support (Ettekal & Shi, 2020; García-Rodríguez et al., 2023; Pakarinen et al., 2020; Wentzel, 2022) and are especially important for those who lack stable family support (Burdick & Corr, 2024). Classmates present more symmetrical relationships, thus promoting the learning of social skills such as cooperation and conflict resolution (Ogden & Hagen, 2018; Reitz et al., 2014). Lastly, close friends provide, in addition to a peer relationship, a safe space to share experiences and emotions and to develop a sense of self (Allen et al., 2022; Howick et al., 2019; Krammer et al., 2023).

Despite the existence of studies on social support in the child and youth population, preadolescents and younger adolescents are underrepresented compared to older adolescents (ages 14–19) (Blum et al., 2014). Yet, many of the difficulties that emerge in adolescence begin earlier, during the transition from childhood to adolescence—when individuals consolidate their emerging identity, initiate many preventable risk behaviors, and acquire essential coping skills for adult life—so it is especially critical to examine social support in this period. Consequently, it is essential to adopt an approach that considers research on preadolescence and adolescence conjointly (Eeden et al., 2021; Münker et al., 2024; Papalia & Martorell, 2024).

There are many instruments to measure social support in the adult population (Gleason & Iida, 2015). However, few scales are designed to assess social support in children and adolescents.

Several well-validated paper-and-pencil instruments have been developed to assess perceived social support in young populations. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) confirms a three-factor structure (Family, Friends, Significant Other) with item–factor loadings of .80–.90, excellent internal consistency (α = .85–.91 for the subscales; α = .88 total), good stability over 2–3 months (test–retest r = .85), and expected inverse correlations with anxiety and depression (r = –.18 to –.24); however, it does not specifically gather information from teachers or classmates. The Social Support Rating Scale (SSRS; Cauce et al., 1982) identifies three dimensions (Family, Formal, Informal), demonstrates adequate reliability (α = .80), four-week stability (r = .70), and moderate correlations with psychosocial adjustment (CBCL r = .30–.81); yet it likewise fails to measure peer and teacher support together.

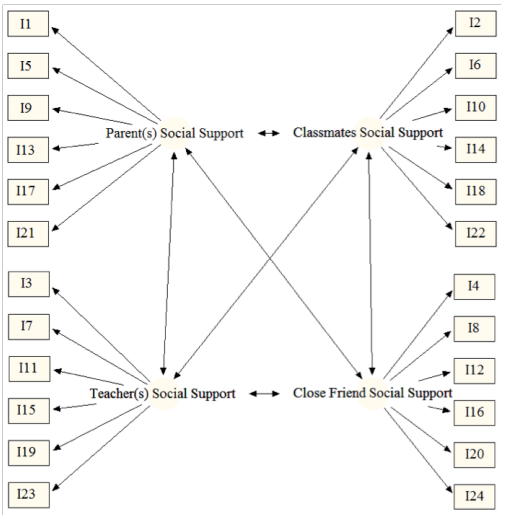
The Child and Adolescent Social Support Scale (CASSS; Malecki & Demaray, 2002) covers all four key sources—parents, teachers, classmates, and friends—and shows strong structural validity (factor loadings explaining 30%–72% of item variance), very high internal consistency (α = .94–.95 total; α = .87–.94 subscales), and acceptable eight-week stability (test–retest r = .70 total; r = .60–.76 subscales); however, its 40-item format with separate frequency and importance ratings can be

lengthy and complex. The Social Support Scale for Children (SSSC; Harter, 1985) also assesses these four sources and, in addition to acceptable reliability (α = .72–.88; test–retest r = .70–.78), recent adaptations report good confirmatory-factor-analysis fit indices and α coefficients above .80 (Lipski et al., 2014; Pastor et al., 2012), supporting its construct validity and applicability; nevertheless, its two-step choice response format can limit applicability and confuse younger children or those with comprehension difficulties.

In a pilot application previously undertaken by our research team, the bipolar format caused confusion and response errors—particularly among younger students. Other researchers had already pointed out this problem (Lipski et al., 2014; Malecki & Demaray, 2002). Furthermore, none of these instruments have been adapted to reflect today's diverse family realities—same-sex parents, single-parent or blended households, extended-family caregivers—which risks underrepresenting large segments of the target population (Grüning Parache et al., 2024; Meil et al., 2023; Zaborskis et al., 2022).

In response to these gaps, the computerized format offers four main advantages over existing paper-and-pencil versions. First, the scale preserves complete coverage of the four primary support sources—parents, teachers, classmates, and close friends—within a single instrument. Second, it simplifies response options by replacing the original two-step forced-choice format with a simple four-point Likert scale ("Totally false" to "Totally true"). Third, it dynamically adapts to diverse family configurations via branching logic: students indicate who they live with, and subsequent items are automatically tailored to match that structure. Finally, its digital administration facilitates rapid application, automated scoring, and longitudinal tracking. These features lay the groundwork for the computerized adaptation described below.

Figure 1. Theoretical Model of the Adapted Harter's Social Support Scale



A questionnaire was designed to evaluate perceived social support in preadolescents and adolescents by adapting Harter's Social Support Scale to a computerized version. Its metric properties —construct validity, reliability, and criterion validity— were tested in a sample of students from Galicia (Spain). First, the factorial structure that best represents their responses to the questionnaire was expected to be that of the original scale (see Figure 1): a model composed of four interrelated factors ("Parent(s)' Social Support," "Classmates' Social Support," "Teacher(s)' Social Support," and "Close Friends' Social Support"). Second, both the factors and items should demonstrate good reliability, in terms of the internal consistency of the item scores comprising each factor and the proportion of variance in each item's scores explained by the latent variables. Finally, the scores in the different subscales of the questionnaire were expected to correlate negatively with the scores on a victimization scale in offline bullying situations, a variable that prior evidence consistently indicates correlates with perceived social support.

Method

Participants

A total of 654 students from 5th grade of primary school to 4th grade of secondary education, aged between 9 and 17 years (M = 12.80, SD = 1.64), participated in the study. They were from 6 schools in Galicia (Spain). Participants were recruited via convenience sampling. Regarding gender, 48.8% identified as girls, 50% as boys, and 1.2% as non-binary. Concerning the schools, 60.7% of the evaluated students were enrolled in public schools (i.e., government-funded and managed) and 39.3% were in subsidized private schools (i.e., government-subsidized private schools). Furthermore, 43.2% attended rural schools and 56.8% attended urban schools.

Measuring Instruments

Adapted Harter's Social Support Scale

This self-report questionnaire, designed and tested in this study (Appendix A), presents 24 items to measure perceived social support among elementary and secondary school students. Each item describes a social support behavior. For each item, participants must indicate to what extent they consider the statement true or false, using a 4-point Likert scale (1 - *Totally false*; 2 - *Somewhat false*; 3 - *Somewhat true*; 4 - *Totally true*).

The scale was designed based on the Spanish version of the Social Support Scale for Children (SSSC; Harter, 1985, 2012; Pastor et al., 2012).

An initial question was added, asking the participant to indicate who they lived with regularly. Based on their response, the rest of the items were adjusted to their family reality. The student could select from the options: father and mother, two fathers, two mothers, a mother, a father, or another caregiver (specifying who). Thus, for example, for the minor who indicated that they lived only with their mother, instead of showing the question "*I feel that my parents really understand me,*" they would see the question "*I feel that my mother really understands me,*" thereby ensuring greater accuracy and relevance in the evaluation.

Thus, the questionnaire that was ultimately tested was designed considering four types of social support (parents, classmates, teachers, and friends), with six items (observable indicators) for each type. The metric properties of this questionnaire are shown in the Results section.

Victimization Scale of the Bullying Section of the Cyberbullying Test (Garaigordobil, 2013)

The Bullying section of the Cyberbullying Test (Garaigordobil, 2013) assesses the frequency of involvement in offline (in-person) bullying situations, as a victim, as an aggressor, and as an observer. For the present work, only the Victimization Scale was considered. After presenting a definition of school bullying, the scale was shown, consisting of four items related to physical, verbal, social, and psychological aggression. The response format is a 4-point Likert scale, with options ranging from 0 = *never* to 3 = *always*. In the adapted version applied in this study (Rodríguez-Enríquez, Álvarez-García, Ares-Ferreirós & Garaigordobil, 2025), the time frame assessed was modified, asking about events that had occurred in the last three months.

Example items include: for physical aggression, *In the past three months, how often have other students pushed, kicked, or physically hurt you?* and for verbal aggression, *In the past three months, how often have other students insulted you, called you names, or spread rumors about you?* The same response format was used for social and psychological aggression items.

High scores indicate high levels of offline bullying experienced. The reliability of the scores obtained with the scale, measured in terms of internal consistency, was high (Cronbach's α = .809).

Procedure

First, the corresponding permits were obtained, and a pilot application was carried out in school with students from Primary and Secondary Education. This phase aimed to evaluate the feasibility of the computerized version, detect possible errors, identify adjustment needs, and calculate the time required for its completion. This step allowed for the previously mentioned modifications of the response format, as well as screen visualization. Some students had access to a computer, while others used a tablet, so improvements were made to ensure proper visualization on any device.

Once the design of the final version was completed, the schools were contacted to inform them about the objectives and characteristics of the study, as well as the voluntary nature of participation and the confidentiality of all data collected. After obtaining authorization from the management teams, this information was provided to the families in writing, including the contact details of the research team to address any questions before they authorized the student's participation.

The questionnaire was administered using Microsoft Forms via a private University of Vigo account. This platform allows branching, so that, depending on the student's answer to the initial family-structure question, subsequent items are automatically tailored to match their living arrangements. No personal identifying information was collected; each participant was assigned a randomly generated code.

This study is part of a larger research project whose protocol was approved by the Institutional Ethics and Bioethics Committee (Ref. CE-DCEC-UVIGO-2020-12-02-8129). Data were processed in compliance with national data protection legislation and the EU General Data Protection Regulation (GDPR), ensuring participants' and legal guardians' rights to access, rectify, erase, and object to the handling of personal data. All information was anonymized and stored on secure servers with access restricted to the research team.

Since 2010, the Government of Galicia's e-DixGal initiative has provided individual digital devices to schools, ensuring that all centers possessed adequate hardware; consequently, no school had to be excluded for lack of devices. The devices used to complete the questionnaire were owned by the participating schools, and no personal identifying data were collected within the form.

Institutional approval was secured from each school's management team, which then obtained explicit written consent from families to participate in the larger research project. Prior to each classroom session, students were informed again about the voluntary, anonymous, and confidential nature of their participation and were encouraged to ask questions.

Before administering the questionnaire in the classroom, the purpose of the study was explained to the students by the researchers, ensuring them that their participation was anonymous, confidential, and voluntary. To ensure item comprehension across the full age range (9–17 years), a brief oral introduction to key items and concepts was provided to students in 5th and 6th grade of primary education. This step was adopted in response to comprehension difficulties observed during the pilot phase with younger participants. Clarifying terminology and expectations in this way helped resolve doubts and increased the likelihood of obtaining reliable responses. The average time to complete the questionnaire was 6 minutes. However, the timing was flexible, based on the age, characteristics of the students, and the resolution of all the questions raised.

Data Analysis

First, the statistical program SPSS 29.0 was used to perform univariate descriptive statistics (percentages, item-total correlations, and indices of skewness and kurtosis) to analyze the use of all values of the scale, the extent to which each item measured the same as the global test, the existence of possible reverse items, and the normality of the scores obtained for each item. Three items with reverse scoring were detected and recoded to continue with the rest of the analysis.

The following EQS 6.2 statistical software was used to analyze the construct validity of the scale through confirmatory factor analyses. Since the instrument used Likert-type responses and therefore measured variables on an ordinal scale, the AGLS estimation method was used, and the variables were defined as categorical. AGLS is appropriate for ordinal variables, as it uses polychoric correlations to estimate parameters without assuming strict normality. The fit of the initial theoretical model was compared with that of two other models that were also theoretically plausible. To determine the goodness of fit of the tested models, the chi-square ratio (χ^2) degrees of freedom (df), the Normed fit index (NFI), the Non-normed fit index (NNFI), the Comparative fit index (CFI), the Bollen's fit index (IFI), the Standardized root mean-square residual (SRMR), the AGLS fit index (AGLS-FI), the AGLS adjusted fit index (AGLS-AFI), the Root mean-square error of approximation (RMSEA), the Akaike information criterion (AIC), and the Consistent Akaike information criterion (CAIC) were used. It is generally considered that fit is good when NFI ≥ .95, NNFI ≥ .95, CFI ≥ .95, IFI ≥ .95, SRMR ≤ .08, and RMSEA ≤ .06 (Hu & Bentler, 1999), and $\chi^2/df < 3$ (Ruiz et al., 2010). The AIC and CAIC allow for model comparison,

Table 1. Descriptive Statistics for each Item (N = 654)

Item	Scale (%)				M	SD	Skew. (SE = .096)	Kurt. (SE = .191)	r_{i-t}
	1	2	3	4					
1	2.4	5.8	31.8	59.9	3.49	0.72	-1.45	1.93	.40
2	4.4	16.5	43.6	35.5	3.10	0.83	-0.66	-0.16	.36
3	6.3	15.4	38.2	40.1	3.12	0.89	-0.78	-0.20	.49
4	4.6	4.9	17.1	73.4	3.59	0.78	-2.05	3.48	.50
5	1.2	3.7	18.7	76.5	3.70	0.60	-2.21	5.07	.42
6	1.4	3.4	23.4	71.9	3.66	0.61	-1.96	4.11	.41
7	4.7	14.4	42.2	38.7	3.15	0.84	-0.77	0.01	.45
8	3.5	5.0	20.2	71.3	3.59	0.75	-1.97	3.42	.54
9	1.1	3.1	16.5	79.4	3.74	0.56	-2.45	6.41	.41
10	48.3	30.9	15.1	5.7	1.78	0.90	0.91	-0.14	-.25
11	7.5	17.4	46.2	28.9	2.96	0.87	-0.61	-0.24	.48
12	3.2	5.7	19.1	72.0	3.60	0.74	-1.96	3.34	.55
13	1.1	3.1	14.2	81.7	3.76	0.55	-2.66	7.50	.43
14	2.8	9.3	48.3	39.6	3.25	0.73	-0.84	0.67	.47
15	2.8	9.9	41.7	45.6	3.30	0.76	-0.95	0.56	.46
16	1.8	2.4	11.9	83.8	3.78	0.58	-3.02	9.57	.52
17	51.5	22.9	18.5	7.0	1.81	0.97	0.85	-0.52	-.31
18	7.2	11.2	36.9	44.8	3.19	0.90	-0.98	0.18	.31
19	8.7	17.1	40.4	33.8	2.99	0.93	-0.65	-0.43	.56
20	3.2	3.8	18.5	74.5	3.64	0.71	-2.21	4.63	.59
21	1.2	2.1	17.6	79.1	3.74	0.55	-2.52	7.19	.42
22	84.4	9.6	4.0	2.0	1.24	0.62	2.88	8.10	-.22
23	15.0	24.8	39.4	20.8	2.66	0.97	-0.27	-0.89	.39
24	3.7	2.9	21.4	72.0	3.62	0.72	-2.15	4.48	.54

Scale Values: 1 = Totally false, 2 = Somewhat false, 3 = Somewhat true, 4 = Totally true. M = Mean; SD = Standard Deviation; Skew.= Skewness index; Kurt. = Kurtosis; SE = Standard Error; r_{i-t} = Corrected item-total correlation.

with lower values being preferable. Once the model with the best fit to the obtained data was identified, standardized factor loadings were analyzed.

Subsequently, the internal consistency reliability of each subscale was assessed by calculating Cronbach's alpha based on the polychoric correlation matrix, given the ordinal nature of the data (ordinal Cronbach's alpha). Additionally, the squared multiple correlation for each item was determined, indicating the proportion of variance of the item explained by the latent variable and, therefore, the reliability of the item in measuring that variable.

Finally, the statistical software SPSS 29.0 was again used to analyze the criterion validity of the test. The Spearman correlation coefficient was calculated between the score obtained in each test factor and an external criterion that presents prior evidence of its association with perceived social support: being a victim of offline bullying.

Results

Analysis of the Items

As shown in Table 1, all scale values were utilized by the participants in the study across all items. The corrected item-total correlation was moderate and positive for all items except for Items 10, 17, and 22, where it was negative. This indicated that all items contributed to measuring the test's construct, although these three items contributed inversely. All the items tended towards high scores, with negative skewness indices, except for Items 10, 17, and 22, which presented the opposite trend (towards low scores and positive skewness indices). Although the scores obtained in most items did not significantly deviate from a normal distribution, some of them (especially Items 13, 16, 21, and 22) presented very high kurtosis indices that distanced them from normality.

Construct Validity

Confirmatory factor analyses were conducted to verify the fit of the theoretical model (see Figure 1). The degree of fit of this model was compared to that of two other theoretically plausible models (see Table 2). Thus, three models were compared. Model 1 was the initial theoretical model, consisting of four interrelated factors (PSS, CSS, TSS, and FSS), in which each questionnaire item was explained solely by one factor. Model 2 consisted of a hierarchical model composed of four first-order factors (PSS, CSS, TSS, and FSS) and one second-order factor ("Perceived social support"). Each first-order factor was explained by the second-order factor, and each item was explained solely by one first-order factor. Model 3 was composed of a single factor ("Perceived social support"). Each item of the questionnaire was explained by that single factor. In general terms, the results (see Table 3) indicated that both the initial theoretical model (Model 1) and the hierarchical model (Model 2) showed good fit indices, although Model 1 demonstrated slightly better fit than Model 2. In both cases, among all the fit indices analyzed, only the SRMR slightly exceeded the commonly established cut-off value, while the rest of the indices indicated an adequate model fit.

Table 2. Tested Models to Analyze the Dimensionality of the Adapted Harter's Social Support Scale

Model	Factors		Items
	Second-order	First-order	
Model 1	-	PSS	1,5,9,13,17,21
		CSS	2,6,10,14,18,22
		TSS	3,7,11,15,19,23
		FSS	4,8,12,16,20,24
Model 2	SS	PSS	1,5,9,13,17,21
		CSS	2,6,10,14,18,22
		TSS	3,7,11,15,19,23
		FSS	4,8,12,16,20,24
Model 3	-	SS	All (1-24)

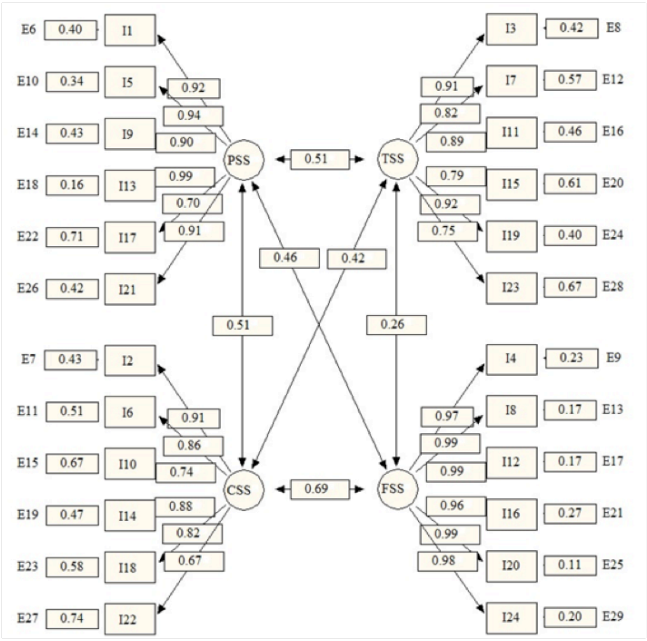
PSS = Parent(s)' Social Support; CSS = Classmates' Social Support; TSS = Teacher(s)' Social Support; FSS = Close Friends' Social Support; SS = Perceived Social Support.

Table 3. Goodness-of-fit Indexes of the Three Tested Models ($N = 654$)

	Model 1	Model 2	Model 3
χ^2	643.145	728.239	1.692.647
df	246	247	252
χ^2/df	2.614	2.948	6.717
NFI	.977	.974	.938
NNFI	.984	.980	.942
CFI	.985	.982	.947
IFI	.985	.982	.947
SRMR	.141	.152	.417
AGLS-FI	.985	.983	.961
AGLS-AFI	.982	.980	.953
RMSEA [CI 90%]	.050 [.045-.054]	.055 [.050-.059]	.094 [.089-.098]
AIC	151.145	234.239	1.188.647
CAIC	-1.197.700	-1.120.088	-193.096

χ^2 = Chi-square; df = Degrees of freedom; NFI = Normed fit index; NNFI = Non-normed fit index; CFI = Comparative fit index; IFI = Bollen's fit index; SRMR = Standardized root mean-square residual; AGLS-FI = AGLS fit index; AGLS-AFI = AGLS adjusted fit index; RMSEA = Root mean-square error of approximation; CI = Confidence interval; AIC = Akaike information criterion; CAIC = Consistent Akaike information criterion.

Figure 2. Factorial Structure of the Adapted Harter's Social Support Scale



In Model 1, the standardized factor loadings (λ) were all high ($\geq .70$), except for item 22, which showed a moderate loading ($\lambda = .67$) (see Figure 2).

Reliability

The reliability of the scores obtained in each subscale of the questionnaire was high or very high (see Table 4), with ordinal Cronbach's alpha values above .80.

Table 4. Reliability of each Item and Factor of the Adapted Harter's Social Support Scale (N = 654)

Factor	Item	α	R^2
Parent(s)' Social Support (PSS)		.920	
	1		.838
	5		.887
	9		.818
	13		.975
	17		.497
	21		.821
Classmates' Social Support (CSS)		.873	
	2		.819
	6		.743
	10		.547
	14		.783
	18		.668
	22		.456
Teacher(s)' Social Support (TSS)		.898	
	3		.823
	7		.674
	11		.791
	15		.625
	19		.839
	23		.555
Close Friends' Social Support (FSS)		.962	
	4		.946
	8		.972
	12		.971
	16		.929
	20		.987
	24		.962

α = Ordinal Cronbach's alpha; R^2 = Squared multiple correlation.

The analysis of the squared multiple correlations (R^2) for each item showed that all items were well explained by their respective factors. Most items exhibited high R^2 values ($\geq .70$), while the remaining items demonstrated moderate explained variance.

Criterion Validity

Table 5. Spearman Correlation Coefficients between the Scores in the Factors of the Adapted Harter's Social Support Scale and the School Bullying Victim Scale (N = 654)

	Victim of offline bullying
Parent(s)' Social Support	-.22***
Classmates' Social Support	-.44***
Teacher(s)' Social Support	-.10**
Close Friends' Social Support	-.13***

$^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

The scores obtained in each of the subscales of the questionnaire correlated negatively and significantly with the score on the Victimization Scale in offline bullying situations (see Table 5).

Discussion

A questionnaire was designed to evaluate perceived social support in preadolescents and adolescents by adapting Harter's Social Support Scale to a computerized version, and its metric properties were evaluated in a sample of Spanish students. The results show that the designed scale offers adequate statistical guarantees for its intended use.

Regarding construct validity, the model that best represents the obtained data consists of four interrelated factors (Parent(s)' Social Support, Classmates' Social Support, Teacher(s)' Social Support, and Close Friends' Social Support). The hierarchical model with a general social support factor also showed a good fit, although it was slightly inferior to the four correlated factors model. Therefore, the use of the questionnaire to obtain a general perceived social support score is also justified. This result adds empirical evidence to the multifactorial nature of the construct, in line with previously published questionnaires (Cauce et al., 1982; Malecki & Demary, 2002; Zimet et al., 1988), and suggests that the adaptations made to the questionnaire have not affected the factorial structure found in the original questionnaire (Harter, 1985, 2012).

However, the slightly elevated SRMR value, together with the only moderate R^2 values observed for certain items (such as items 10, 17, 22, and 23), suggests that some aspects of the model are not optimally specified or that these items are less well explained by their respective factors. Future research should consider revising these items to improve both the explained variance and the global fit indices.

The reliability analyses show the relevance of the model ultimately considered (the initial theoretical model). The internal consistency indices suggest that the items or observable indicators that comprise them measure the same latent variable without redundancy.

Regarding the criterion validity, the scores obtained with the adapted Perceived Social Support Scale in this study correlate significantly and negatively with the score on the Victimization Scale in offline bullying situations. There is a solid body of prior evidence showing that perceived social support and reporting being a victim of bullying correlate negatively (Castaño-Pulgarín et al., 2022; Kowalski et al., 2014; Zych et al., 2019), so the correlation found in this study provides further evidence that the designed scale really measures perceived social support.

The present work has various theoretical and practical implications. From a theoretical perspective, it provides empirical evidence contributing to the conceptual delimitation of perceived social support in preadolescence and adolescence, it distinguishes different types of support based on their source and identifies representative observable indicators of each type. From a practical perspective, it offers professionals and researchers an instrument for assessing social support that is brief, easy to apply, code, and analyze, is cost-effective compared to other evaluation methods, and presents suitable metric guarantees. Within educational and clinical contexts, the validated computerized scale may be employed to perform rapid diagnostics of support networks in school settings or psychological services, thereby allowing more personalized interventions to be designed—for example, bullying or school violence prevention programs that foster peer support or family workshops to reinforce parental support perception. Its brevity and digital format facilitate integration into online assessment platforms and continuous monitoring systems. Furthermore, the improved response format and computerized adaptation to diverse family configurations are major enhancements, enabling the scale to measure four specific sources of perceived social support (parents, classmates, teachers, and close friends) in a simple and accessible way. In this way, the validated instrument not only provides a global index of perceived social support but also allows differentiated evaluation of each of these four sources. The relationship observed in this study and previous works (Castaño-Pulgarín et al., 2022; Kowalski et al., 2014; Rodríguez-Enríquez, Álvarez-García, Rodríguez-Alvarado & Ares-Ferreirós, 2025; Zych et al., 2019) between perceived social support and reporting being a victim of bullying suggests the need for bullying programs to include the development of social support from family, teachers, classmates, and friends, among other contents, to address the prevention and treatment of bullying.

For all these reasons, this work contributes to the study of social support in preadolescence and adolescence; however, several limitations must be acknowledged. First, as a self-report measure, the results may be affected by response biases such as distortion or social desirability, and thus comparisons with other sources (e.g., direct observation or third-party reports) are recommended. Second, although the questionnaire was tested with a sufficiently large sample for the analyses, the sample was drawn from a specific population, limited to certain ages and geographical areas. Consequently, any generalization of the conclusions from this study to other ages or regions should be made with caution. Third, criterion validity was evaluated only via offline bullying victimization; future research should incorporate multiple criteria (e.g., psychological well-being, academic performance, or resilience indicators) to broaden the empirical support for the instrument. Fourth, gender invariance of the scale should be examined in subsequent studies to ensure equivalent measurement across boys and girls and to rule out differential biases in perceived social support.

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Conflicts of interest

The authors declare that they have no conflicts of interest

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Appendix A

Computerized Adaptation of Harter' Social Support Scale

1. Siento que mis padres realmente me entienden*
   *I feel that my parents really understand me**
2. Siento que gusto a mis compañeras y compañeros de clase tal y como soy
   I feel that my classmates like me just the way I am
3. Siento que tengo algún profesor o profesora que me ayuda si estoy triste o tengo un problema
   I feel that I have a teacher who helps me if I am sad or have a problem
4. Tengo algún amigo o amiga íntima a quien puedo contar mis problemas
   I have a close friend to whom I can tell my problems
5. Tengo padres que quieren escuchar mis problemas*
   *I have parents who want to listen to my problems**
6. Tengo compañeras o compañeros de clase de los que puedo ser amigo/a
   I have classmates I can be friends with
7. Tengo algún profesor o profesora que me ayuda a sacar lo mejor de mí
   I have a teacher who helps me bring out the best in me
8. Tengo alguna amiga o amigo íntimo que me entiende de verdad
   I have a close friend who truly understands me
9. Tengo padres a los que les importan mis sentimientos*
   *I have parents who care about my feelings**
10. Creo que mis compañeros de clase se ríen de mí
    I think my classmates make fun of me
11. Tengo algún profesor o profesora que se interesa por mí
    I have a teacher who takes an interest in me
12. Tengo algún amigo o amiga íntima a quien puedo contar mis problemas
    I have a close friend to whom I can tell my problems
13. Tengo padres que me tratan como si realmente les importara*
    *I have parents who treat me as if they really care about me**
14. Tengo compañeros de clase que prestan atención a lo que digo
    I have classmates who pay attention to what I say
15. Tengo algún profesor o profesora que es justo/a conmigo
    I have a teacher who is fair with me
16. Tengo algún amigo o amiga íntima con la que me gusta pasar el rato
    I have a close friend with whom I enjoy spending time
17. Noto que a mis padres les gustaría que yo fuese diferente a como soy*
    *I feel that my parents would like me to be different from who I am**
18. Los compañeros de mi clase me suelen invitar a jugar con ellos
    My classmates usually invite me to play with them
19. Si me siento mal hay algún profesor o profesora que se interesa por mí
    If I feel bad, there is a teacher who takes an interest in me
20. Tengo alguna amiga o amigo íntimo que escucha con atención lo que le digo
    I have a close friend who listens carefully to what I say
21. Tengo unos padres que le dan importancia a lo que hago*
    *I have parents who value what I do**
22. Paso los recreos jugando sola o solo
    I spend recess playing alone
23. Tengo alguna profesora o profesor que me trata como una persona valiosa
    I have a teacher who treats me as a valuable person
24. Tengo alguna amiga o amigo íntimo a la que le importan mis sentimientos
    I have a close friend who cares about my feelings

*Note. * the word "parents" is adjusted according to the cohabitation figures previously indicated by the young person.*