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Spanish Adaptation of the Family Involvement Questionnaire - High School: Version for Parents

Jorge M. Dueñas[a], Fabia Morales-Vives[a, b], Marta Camarero-Figuerola[c], and Juana M. Tierno-García[c]

[a]Psychology department, Universitat Rovira i Virgili, Tarragona, Spain; [b]Research Center for Behavior Assessment (CRAMC), Tarragona, Spain; [c]Pedagogy Department, Universitat Rovira i Virgili, Tarragona, Spain

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ABSTRACT

Many studies highlight the importance of parental involvement in the academic performance of children and adolescents across subject areas. In view of the lack of instruments in Spain to assess family involvement of parents of adolescents, we undertook this study to develop the Spanish adaptation of the Family Involvement Questionnaire - High School version (FIQ-HS). The sample consisted of 928 parents (85.7 % females) with adolescent sons and daughters. Exploratory and confirmatory factor analyses substantiated the expected three-factor structure (home-school communication, school-based activities, and home-based activities), though seven poorly functioning items were removed. The results show that this instrument has adequate psychometric properties, good reliability, and convergence with another measure of family adaptability and cohesion. Therefore, the FIQ-HS is adequate for the assessment of family involvement in Spanish parents.

La adaptación española del Cuestionario de Implicación Familiar - bachillerato: versión para padres

Palabras clave:
Implicación familiar
Evaluación
Bachillerato
Familia

RESUMEN

Muchos estudios subrayan la importancia de la implicación familiar en el rendimiento académico de niños y adolescentes en diferentes materias. Teniendo en cuenta la falta de instrumentos en España para evaluar la implicación familiar de los padres de adolescentes, se ha llevado a cabo este estudio para desarrollar una adaptación española del instrumento *Family Involvement Questionnaire - High School version* (FIQ-HS). La muestra constó de 928 padres (85.7% mujeres) con hijos e hijas adolescentes. Los análisis factoriales exploratorio y confirmatorio confirmaron la estructura esperada de tres factores (comunicación hogar-escuela, actividades basadas en la escuela y actividades basadas en el hogar), aunque se eliminaron siete ítems que presentaban mal funcionamiento. Los resultados muestran que este instrumento presenta unas adecuadas propiedades psicométricas, buena fiabilidad y convergencia con otra medida de adaptabilidad familiar y cohesión. Por lo tanto, el FIQ-HS es adecuado para evaluar la implicación familiar de los padres españoles.

Several studies show that various family sociodemographic factors (socioeconomic and educational level of parents, immigration, number of members in the household, etc.), or family psychosocial factors (family involvement in the children education, family satisfaction, family structure, etc.) are related to academic performance in children and adolescents (e.g., Brake & Büchner, 2013; Culyba et al., 2016). Of all these family factors, the importance of parental involvement with their child's schooling and its positive effects on the academic performance of children and adolescents across all subject areas is often highlighted (e.g., Garbacz et al., 2018; Hampden-Thompson & Galindo, 2017; Serna & Martinez, 2019). For this reason, the current study focuses specifically on assessing this variable in parents with adolescents.

Parental involvement refers to parents' investment of resources in the education of their children so that they can achieve social and academic goals (Boonk et al., 2018). These actions and activities are based on social communication processes between the family and the educational center (Epstein, 2010). Epstein (2010), who considered parental involvement to be a multifaceted construct, proposed a theoretical framework that has been widely used. Epstein (1992) proposed six types of school-related opportunities, which may help schools to enhance parent involvement: 1) assisting parents in child-rearing skills, 2) school-parent communication, 3) involving parents in school volunteer opportunities, 4) involving parents in home-based learning, 5) involving parents in school decision-making, and 6) involving parents in school-community. In

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2002, she reformulated this proposal and suggested the following types of parental involvement: a) parenting (schools teach parenting skills and provide support to families, and parents share their family backgrounds, values, and goals with the school), b) communicating (schools communicate their events, programs, and an individual child's progress), c) volunteering (families act as volunteers to support students), d) learning at home (family members support students through learning activities at home), e) decision-making (families are included in school decisions through committees, action teams, or other organizations), and f) collaborating with the community (schools help families to connect with community resources or services, organizations, businesses, and post-secondary education). Therefore, parental involvement implies that parents take part in activities at the educational center (volunteering for school events, participating in classroom projects, taking part in the school's parent-teacher association, etc.), provide academic and logistical support at home to reinforce school learning (helping with homework and with educational choices, providing home conditions that are conducive to study, etc.), and build communication bridges with other families and the teaching staff to understand the various school processes and the performance, attitudes, and aptitudes of their children (Benner et al., 2016; Dearing et al., 2006; Sadiku & Sylaj, 2019).

According to Stewart (2008), parental involvement can become a powerful influence on school and academic policies, helping to define more ambitious pedagogical objectives, and affecting teaching-learning processes of the school community. It also has a positive relationship with academic performance (Benner et al., 2016; Boonk et al., 2018; Stormshak et al., 2009) and school engagement (Cheung & Pomerantz, 2011). According to Dearing et al. (2006), family involvement promotes positive attitudes towards education and increased self-efficacy, which in turn may promote literacy performance. In fact, these positive attitudes and academic satisfaction are key issues that can contribute to the quality of learning (Vergara-Morales et al., 2018). Moreover, parent involvement is associated with decreases in behavior problems and increases in children's social skills (El Nokali et al., 2010), and it is particularly beneficial for more disadvantaged adolescents (for example, those with a lower socioeconomic status) (Benner et al., 2016).

Despite the importance of parental involvement in the various educational stages, families tend to be more involved in first academic years, especially in kindergarten and primary school, and less in high school (Bhargava et al., 2017; Spera, 2005). Decrease in involvement of families in adolescence may have an impact on academic performance (Epstein, 2011), increasing the possibility of school dropout and failure (Stormshak et al., 2009). This may have an even greater impact on vulnerable adolescents, such as those at risk of social exclusion or in a situation of poverty (Benner et al., 2016; Bhargava et al., 2017; Patton et al., 2012). Furthermore, complex structures of high schools also lead to less monitoring and supervision by school personnel. For this reason, in this stage parents need to be involved, especially in the transition to secondary education and with underachievers who are not sufficiently able to self-monitor and self-manage their behaviour. As Wheeler (1992) pointed out, parents need to be involved in secondary schools if students are to develop into successful adults.

Although family involvement has proven to be an important construct for students' teaching-learning processes, in both formal and informal education, few objective instruments evaluate and measure this construct. The Family Involvement Questionnaire (FIQ) by Fantuzzo et al. (2000) is one of the most used multifactorial instruments to evaluate parents' involvement in early childhood education. For this reason, it is also known as the Family Involvement Questionnaire-Early Childhood (FIQ-EC). It was developed using Epstein's framework, but factor analyses only showed three factors: school-based involvement (taking part in activities organized by the educational center), home-based involvement (providing academic and logistical support at home to reinforce school learning), and home-school conferencing (communication with teaching staff and other parents to understand school processes and their children's performance, attitudes, and aptitudes). This instrument has been adapted in a variety of countries (Ahmetoğlu et al., 2018; Garbacz & Sheridan, 2011) and several versions have been developed for ethnic minorities living in the United States, such as Latin American families (McWayne et al., 2015). Fantuzzo et al. (2013) developed a shorter version of the FIQ-EC, with 21 items instead of 42, which assesses the same three factors. Its psychometric properties are good.

Alternative versions of the FIQ have been developed for parents with children at other school levels: the FIQ-Elementary School (FIQ-ES; Manz et al., 2004) and the FIQ-High School (FIQ-HS; Grover et al., 2016). The FIQ-HS is a 40-item questionnaire on a four-point Likert scale (1 = *rarely*, 4 = *always*). Of all the items, 34 originally belonged to the FIQ-EC, with slight changes in wording. Exploratory factor analyses carried out by the authors who developed this version revealed the three expected factors (although they present some differences in their composition in comparison with FIQ-EC) after 15 of the 40 items had been removed. The home-based involvement factor contained 9 items referring to parental activities outside school that promote learning, such as talking with their teenage children about careers and schooling, and helping them with homework. The school-based involvement factor contained only 5 items, which referred to parent behavior in the school setting, such as volunteering and participating in family social activities at school or school fundraising activities. Finally, the home-school communication factor contained 11 items referring to forms of contact that parents might have with school staff (talking with teachers about difficulties at school, accomplishments and policies, and contacting the school for information). Despite these results, the authors did not remove poorly functioning items and used the 40 items to calculate participants' scores on the three scales.

In view of the importance of family involvement during the high school period, and that there is no version of the FIQ-HS for adolescents' parents in Spain, we decided to adapt the questionnaire to this population on the basis of the version developed by Grover et al. (2016). It is important to have an instrument available for this school stage because parents become less involved in the education of their children as they move into adolescence, which may have negative consequences on their academic achievement. Therefore, the aim of this research is to develop the Spanish adaptation of FIQ-HS high school version with adequate psychometric properties. As mentioned above, the FIQ-HS has 40 items, although the authors found that some of them did not load on some factors. For this reason, we took the initial 40 items and determined which of them were suitable for the Spanish population in order to develop a version that only includes these items.

Method

Participants

The sample was collected in 33 Spanish provinces. It consisted of 928 Spanish parents (85.7% females, 13.7% males, and 0.6% unspecified) between 28 and 69 years old (M = 46.86, SD = 5.45), with sons or daughters in high school. In terms of sociodemographic characteristics, the sample can be considered heterogeneous. More specifically, 4.7% were single, 76.1% married, 11.6 % divorced, 1.1% widowed, and 6.5% cohabiting. Participants' educational level was basic (10.3%), medium (35.3%), or higher (44.3 % had a university degree, 7.3% a master degree, and 2.8% a PhD). Furthermore, 37.3% lived in rural areas and 62.7% in urban areas. They were also asked about their annual income on a scale with seven response options: 1) up to €5,000 (4.2% of the participants), 2) from €5,001 to €10,000

(4.7%), 3) from €10,001 to €15,000 (10.9%), 4) from €15,001 to €20,000 (11%), 5) from €20,001 to €30,000 (23.8%), 6) from €30,001 to €50,000 (29.6%), and 7) €50,001 and over (15.8%) incomes.

Instruments

The Family Involvement Questionnaire-High School Version (FIQ-HS) for parents was adapted following the steps recommended by Muñiz et al. (2013). A back-translation was carried out by native English speakers with a proficient understanding of Spanish, and expert researchers in the field (university lecturers) discussed the item content and their translation to ensure that both linguistic and cultural aspects were respected. As a starting point, we took the original questionnaire's 40 items, not only the 25 that had good loadings in the study by Grover et al. (2016). These items are rated on a 4-point Likert scale (*rarely*, *sometimes*, *often,* and *always*).

We used the Spanish adaptation of the Family Adaptability and Cohesion Evaluation Scale (FACES) (Olson et al., 1982) developed by Musitu et al. (2001), entitled Family System Evaluation Questionnaire (with the Spanish acronym of CESF). It consists of 20 items with a five-point response format (from 1 = *almost never* to *5 = almost always*). The inventory contains two factors that measure family system: a) cohesion (10 items) and b) adaptability (10 items). Internal consistency in our sample was α = .81 for cohesion and α = .70 for adaptability. We decided to use this questionnaire in order to assess the convergent validity of the FIQ questionnaire because previous studies had shown that there is a relationship between family involvement in the school and family structure and cohesion (González-Pienda et al., 2003; Myers & Myers, 2015).

Procedure

The battery of tests was administered online by means of a survey designed for this purpose. It included information about the response format for the different questionnaires and procedure for completing them. Instructions highlighted that it only targeted to parents of adolescents. They were also asked if they had at least one teenage son/daughter, and those participants who provided negative answers were excluded from data analysis. Moreover, parents had to accept conditions of the study before participating and they were free to drop out at any time. Confidentiality and data protection were guaranteed, and questionnaires were completely anonymous.

To recruit the sample, researchers contacted several high schools throughout Spain via email. When the school management team agreed to participate in the study, they were asked to send the website address with the questionnaires to parents of adolescent students. Once the parents had completed the questionnaire, the website allowed them to share it with other parents on the social networks (e.g., WhatsApp). We chose the online format because we believed it would provide us with a larger sample of parents from all over the country. Several authors have suggested that psychological questionnaires can be administered online and that the results are similar to those of paper administrations (e.g., Mangunkusumo et al., 2006).

The sample of 928 individuals was split in two halves (calibration and validation) using the DUPLEX algorithm (Snee, 1977), which provides two subsamples that are equally representative of the same population (i.e., all possible sources of variance are enclosed in both subsamples). Exploratory factor analyses (EFAs) were carried out with the first calibration subsample in order to determine (a) the most appropriate number of factors underlying data and (b) any poorly functioning items that had to be removed. The final solution obtained in the calibration sub-sample was then fitted in the second validation subsample to see if results were generalizable to representative samples drawn from the target population. The results of both analyses agreed closely and led to same conclusions. Given the essential invariance of results and the fact that the solution was remarkably clear and approached simple structure, the overall sample was used in a final confirmatory factor analysis.

EFAs were carried out using FACTOR 10.9.02 (Lorenzo-Seva & Ferrando, 2006) and the confirmatory factor analysis was carried out using MPlus v8. For scale analyses, SPSS 25 was used.

Results

Exploratory Factor Analysis

EFA in the calibration subsample was fitted using robust unweighted least squares (RULS) estimation with second order (mean and variance) corrections. As factors were expected to be correlated, the direct solution was then obliquely rotated using robust Promin rotation (Lorenzo-Seva & Ferrando, 2019). Many item scores had extreme distributions with skewness above 1 in absolute value, and sample sizes were also relatively large. So, we decided to treat item scores as ordered-categorical, and fit the non-linear EFA model with the inter-item polychoric correlation matrix (Ferrando & Lorenzo-Seva, 2013). Kaiser-Meyer-Olkin (KMO, Kaiser, 1970) index value was .87, which suggested that the correlation matrix was suitable for factor analysis.

The most appropriate dimensionality was first assessed by using Schwarz' Bayesian information criterion (BIC), an index that takes into account both parsimony and goodness of fit. The minimum BIC was obtained with five factors, and the corresponding rotated solution consisted of one factor that included the items of home-school communication and another factor that included the items of school-based activities, which was only to be expected. However, the home-based activities expected dimension was split in three highly correlated factors. One of these factors only included four items of which one (item 19) was complex, and loaded on two of home-based activities-related factors. Moreover, items 29 and 30 correlated very highly with each other (.80), giving rise to a "doublet", artifactual factor. The two remaining factors related to home-based-activities were strongly correlated (.59). These results clearly suggest a case of "factor splitting" in which an essentially unitary factor is artifactually broken up into sub-factors that mostly appear due to specific item contents. Taking all of this into account, we decided to fit a tri-factor solution. The solution had an appropriate fit and, once rotated, provided a structure that agreed with theoretical expectations: home-school communication (F1), school-based activities (F2), and home-based activities (F3). As far as structure simplicity is concerned, however, items 31 and 32 did not load on any factor (which suggests that they were mostly "noise" items), and items 17, 20, 23, 25, and 39 were complex and loaded on several factors. For this reason, we decided to remove all of these items (see Appendix) and fit a three-factor solution with the remaining 33 items. As expected, we replicated the solution above but with a much clearer structure: Bentler's simplicity (S) index (1977) was .99 and the Loading Simplicity (LS) index (Lorenzo-Seva, 2003) was .57. This result suggests that the solution neared an Independent-Clusters (IC) structure in which each item mainly loaded on a single factor.

The final 3-factor, 33-item solution obtained in the calibration sub-sample was then fitted in the second validation subsample. The solution fitted well and, when rotated, again replicated the expected IC structure: Bentler's simplicity (S) index (1977) and the loading simplicity (LS) index (Bentler, 1977; Lorenzo-Seva, 2003) were .99 and .51, respectively. Overall, cross-validation results suggest that the structure is generalizable to representative samples drawn from the target population.

Table 1. Loading Matrix Obtained in the Confirmatory Factor Analysis with the Whole Sample and Factor Reliabilities

Item	F1	F2	F3
1. I attend conferences with teachers to talk about my teenager's learning or behavior. (*Asisto a reuniones con profesores/as para hablar del aprendizaje o comportamiento de mi hijo/a adolescente*)	.61	.00	.00
2. I contact my teenager's school to get information. *(Contacto con el instituto de mi hijo/a para pedir información)*	.71	.00	.00
7. I talk to school staff about school and classroom rules. (*Hablo con el personal del instituto sobre las normas de clase y del centro*)	.72	.00	.00
11. I communicate with school staff if I am concerned about things that my teenager tells me about school. *(Me comunico con el personal del instituto si estoy preocupado por cosas que mi hijo/a me comenta acerca del mismo)*	.70	.00	.00
12. I talk to school staff about preparing my teenager for life after high school.' *(Hablo con el personal del centro sobre la preparación de mi hijo/a para la vida después del instituto)*	.76	.00	.00
16. I talk to the teachers about my teenager's accomplishments. *(Hablo con los/as profesores/as sobre los progresos de mi hijo/a)*	.77	.00	.00
26. I talk with school staff about schoolwork my teenager is expected to complete at home. *(Hablo con el personal del instituto sobre los trabajos que mi hijo/a tiene que hacer en casa)*	.64	.00	.00
27. I talk with school staff about our personal and family matters if it affects my teenager's work at school. *(Hablo con el personal del instituto sobre asuntos personales y familiares si afectan al rendimiento de mi hijo/a en el instituto)*	.59	.00	.00
36. I talk with school staff about disciplinary procedures and problems. *(Hablo con el personal del instituto sobre los problemas y procedimientos disciplinarios)*	.67	.00	.00
38. I talk with my teenager's teachers on the telephone or through email. *(Hablo con los/as profesores/as de mi hijo/a por teléfono o correo electrónico)*	.56	.00	.00
5. I suggest activities or school trips to teachers. (*Sugiero actividades o excursiones a los profesores/as*)	.00	.64	.00
6. I attend parent workshops or trainings offered by my teenager's school. *(Asisto a talleres o cursos de formación para padres y madres que ofrece el instituto de mi hijo/a)*	.00	.69	.00
14. I volunteer at my teenager's school. (*Soy voluntario en el instituto de mi hijo/a*)	.00	.87	.00
15. I participate in fundraising activities at my teenager's school. *(Participo en actividades de recaudación de fondos en el instituto de mi hijo/a)*	.00	.76	.00
18. I participate in community and family social activities at my teenager's school (ex. Sports games, plays, carnivals). *Participo en actividades sociales, familiares y comunitarias en el instituto de mi hijo/a (por ejemplo, partidos, representaciones, festivales)*	.00	.74	.00
35. I attend organized family-school associations at my teenager's school (ex. parent-teacher association meetings) *(Participo en asociaciones integradas por familias y personal del centro de mi hijo/a (por ejemplo, reuniones del AMPA)*	.00	.82	.00
3. I limit my teenager's TV watching or computer time at home. *(En casa, limito el tiempo que mi hijo/a pasa delante del televisor o del ordenador)*	.00	.00	.41
4. I make sure my teenager completes their homework. *(Me aseguro de que mi hijo/a termine sus deberes)*	.00	.00	.48
8. I make sure that my teenager has a way to get to school in the morning. *(Me aseguro de que mi hijo/a tenga manera de llegar al instituto por la mañana)*	.00	.00	.65
9. I share stories with my teenager about when I was in school. *(Le cuento historias a mi hijo/a sobre cuando yo iba al instituto)*	.00	.00	.62
10. I ensure that my teenager has resources available to research post-secondary opportunities (ex. colleges, careers). *Me aseguro de que mi hijo/a disponga de recursos para informarse sobre oportunidades académicas posteriores a la educación secundaria (por ejemplo, universidades o formación profesional)*	.00	.00	.66
13. I ensure that my teenager has a quiet place at home where they can complete schoolwork. *(Me aseguro de que mi hijo/a tenga algún sitio tranquilo en casa, donde pueda hacer los deberes)*	.00	.00	.65
19. I maintain clear rules at home that my teenager should obey. *(Establezco normas claras en casa que mi hijo/a debe obedecer)*	.00	.00	.59
21. I ask my teenager how his/her day was at school. *(Le pregunto a mi hijo/a cómo le ha ido el día en el instituto)*	.00	.00	.69
22. I encourage my teenager to invite their friends to our home. *(Animo a mi hijo/a a que invite a sus amigos/as a venir a casa)*	.00	.00	.51
24. I make sure that my teenager has a way to get to home from school in the afternoon. *(Me aseguro de que mi hijo/a tenga formas de llegar a casa después de las clases)*	.00	.00	.73
28. I talk with my teenager about what their life will be like after they graduate high school. *(Hablo con mi hijo/a acerca de cómo será su vida después de terminar el instituto)*	.00	.00	.69
29. My teenager has chores to do at home. *(Mi hijo/a tiene asignadas tareas domésticas)*	.00	.00	.39
30. I teach my teenager how to perform home-living skills (ex. laundry, dishes, car maintenance). *Enseño a mi hijo/a cómo hacer tareas domésticas básicas (por ejemplo, hacer la colada, lavar los platos, el mantenimiento del coche)*	.00	.00	.39
33. I help my teenager with academic skills they are struggling with. *(Ayudo a mi hijo/a con los contenidos académicos que más le cuestan)*	.00	.00	.58
34. I talk with my teenager about possible careers they are interested in. *(Hablo con mi hijo/a sobre las posibles profesiones que le interesen)*	.00	.00	.78
37. I provide assistance or check-in with my teenager when they are completing homework. *(Ayudo a mi hijo/a con los deberes o voy a verlo cuando los está haciendo)*	.00	.00	.57
40. I talk to my teenager about how school has helped me. *(Hablo con mi hijo/a sobre para qué me sirvió estudiar)*	.00	.00	.70
Reliabilities	.89	.89	.90

Note. F1 = home-school communication; F2 = school-based activities; F3 = home-based activities.

Confirmatory Factor Analysis

As the results of EFAs in both subsamples led to the same conclusions and a remarkably clear and simple structure, we performed a final CFA on the overall sample. The proposed solution was based on that obtained in previous EFAs and consisted of a three-correlated-factor solution with a full IC structure, in which each item had only a non-zero loading on one factor. The model almost had an acceptable fit. However, modification indices suggested that the error terms of three pairs of items were substantially correlated.

This was expected because the corresponding item stems were either very similarly worded or tapped similar (although not identical) content, as can be seen in Table 1 (pairs 8-24, 29-30 and 33-37). So there were two possible options: removing one item from each pair or maintaining the items by allowing their error terms to correlate. The second option is generally considered to be highly undesirable when it is only data-driven and not theory-driven or logically derived from the wording or content of the item. We decided to choose the second option because this result was expected, so it was not data driven, and we preferred not to lose the information provided by the removed items. Multiple indices of fit were examined to evaluate the adequacy of this model. Comparative measures of fit in relation to the null model were acceptable: CFI = .93, TLI = .93, and RMSEA, a measure of relative fit per degree of freedom, was quite good, .048. So data clearly suggest that the proposed solution is tenable.

Table 1 shows the rotated loading values and reliabilities of corresponding factor score estimates. As can be seen, all loadings are substantial so derived factor scores are highly reliable even when each factor is only defined by a moderate number of items. Table 2 shows the inter-factor correlation matrix.

Table 2. Inter-factor correlation matrix

	FIQ-HS		
	F1	F2	F3
F1	-		
F2	.49**	-	
F3	.54**	.24**	-

Note. F1 = home-school communication; F2 = school-based activities; F3 = home-based activities
** $p < .01$.

Convergent Validity

Table 3 shows product-moment correlations between FIQ and CESF questionnaires. As expected, all correlations are positive and significant. Therefore, families characterised by greater adaptability and cohesion tend to participate to a greater extent in their teenager's school and academic work. These families show higher scores of home-school communication, school-based activities, and home-based activities.

Table 3. Correlations between FIQ-HS and CESF Questionnaires

	FIQ-HS		
CESF	F1	F2	F3
Adaptability	.21**	.16**	.35**
Cohesion	.24**	.15**	.51**

Note. F1 = home-school communication; F2 = school-based activities; F3 = home-based activities.
** $p < .01$.

Comparison between Fathers and Mothers

Table 4 shows descriptive statistics for the three factors of FIQ for each sex. As can be seen, fathers obtained lower scores on factors 1 and 3 than mothers. These results suggest that mothers are more involved in home-school communication and school activities, but there are no differences with fathers in home-based activities.

Table 4. Comparison between Fathers and Mothers in the Three Factors of FIQ-HS

FIQ	Fathers	Mothers		
	M (*SD*)	*M* (*SD*)	*t* (*df*)	*p*
F1	48.6 (7.4)	50.2 (5.3)	-2.4 (146.9)	.017
F2	49.5 (6.3)	50.4 (5.4)	-1.4 (156.1)	.158
F3	49.0 (4.8)	50.1 (3.5)	-2.5 (147.9)	.015

Note. F1 = home-school communication; F2 = school-based activities; F3 = home-based activities.
** $p < .01$.

Discussion

Although the literature points out the importance of family involvement in formal and informal teaching-learning processes (Kim & Hill, 2015), at present, few instruments evaluate this construct. In fact, we do not know of any self-administered instrument with adequate psychometric properties for parents of adolescents that assesses family involvement and has been developed or adapted for the Spanish population. For this reason the present study aimed to develop a Spanish adaptation of the high school version of the FIQ. The FIQ-HS is a questionnaire that was developed in the United States by Grover et al. (2016). It has 40 items and three subscales: home-school communication, school-based activities, and home-based activities. However, factor analyses carried out by the authors revealed 15 poorly functioning items, which did not load on any factor or had a small loading on their own factor. However, authors did not remove these items and used them to calculate participants' scores on each subscale.

Results of the exploratory factor analysis carried out in the current study suggested the expected three factors: home-school communication, school-based activities, and home-based activities. There were only seven poorly functioning items (17, 20, 23, 25, 31, 32, and 39), which were removed from subsequent analysis. Four of these items also functioned poorly in the study by Grover et al. (2016). More specifically, the home-based communication factor is equivalent to the factor found in the study by Grover et al. (2016), with the exception of item 20, which is one of the items removed in the current study. The school-based activities factor includes all the items of the same factor in the study by Grover et al. (2016), with the exception of item 23. Moreover, this factor in the current study includes two additional items (5 and 6), both of which are related to participation in school activities, like the other items of this factor. Of the nine items in home-based-activities factor in the original study, eight are also included in the current study (except item 39: "I talk about how my teenager is doing in school to family and friends"). In fact, item 39's content does not refer to activities at home, which may explain the problem with this item. Moreover, this factor also includes additional items 3, 4, 8, 13, 19, 21, 24, 29, and 30, all of which refer to different educational activities that involve home.

Therefore, this adaptation of the FIQ-HS includes 33 items and it assesses the three expected factors with a remarkably clear and simple structure. This solution was replicated in a different subsample, which shows the stability of the solution. Regarding confirmatory factor analysis, modification indices suggested that the error terms of three pairs of items were substantially correlated. As this was expected, and because the corresponding item stems were either similarly worded or tapped similar content, we decided to maintain these items by allowing their error terms to correlate. Fit indices suggest that the proposed solution is tenable. Moreover, derived factor scores are highly reliable, as reliability indices show. The convergent validity of the FIQ-HS Spanish version was assessed using Pearson correlations with the two scales of CESF questionnaire. Positive and significant correlations were found between factors of the CESF, family adaptability, and family cohesion, and the three factors of FIQ-HS Spanish version. These results are consistent with those of previous studies, which have also shown a relationship between these constructs. More specifically, Myers and Myers (2015) reported positive and meaningful relationships between family structure and parental involvement. These data have also been reported in Spanish samples. For example, González-Pienda et al. (2003) found that parental involvement can be partly explained by family adaptability and family cohesion.

Fathers scored lower than mothers on home-school communication and home-based activities. These results are consistent with those reported in the literature. In fact, the meta-analysis carried out by Kim and Hill (2015) with 52 empirical studies reported same results.

Applied psychologists like to compute scores of psychological questionnaires as raw additions of individuals' answers to items (raw scores). However, a drawback of FIQ-HS is that scores to be interpreted must be factor scores (not raw scores). To solve this drawback, we developed a public internet application that applied psychologists can use to obtain factor scores. It is free share software available at http://www.psicologia.urv.cat/ca/utilitats/fiq-hs/

To sum up, the results show the reliability and validity of the FIQ-HS questionnaire. One advantage of this version over the original version is the replicability of factor structure in more than one sample, and the removal of poorly functioning items from the final version. Furthermore, this study was carried out with a large heterogeneous sample from all provinces of Spain.

Results of the present study have different implications, especially for education, as educational psychologists will be better able to advise families with adolescent children and to develop intervention programs. In research, a questionnaire is a practical tool for assessing family involvement, individually and collectively, which will help to advance in the study of this construct and its relationship with academic and psychosocial variables that affect Spanish adolescent students.

Conflict of Interest

The authors of this article declare no conflict of interest.

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Appendix

Poorly Functioning Items that Had to Be Removed

17. I bring home learning or post-secondary materials for my teenager (ex. books, videos, magazines, brochures).
Llevo a casa material sobre formación profesional o estudios superiores para mi hijo/a (por ejemplo, libros, vídeos, revistas, folletos).

20. I talk to school staff when my teenager has difficulties at school.
Hablo con el personal del centro cuando mi hijo/a tiene problemas en el instituto.

23. I talk with other parents about school meetings and events.
Hablo con otros padres y madres acerca de reuniones y eventos escolares.

25. I talk with people at my teenager's school about training or career development opportunities for myself.
Hablo con personas del instituto de mi hijo/a sobre oportunidades de formación o desarrollo profesional para mí.

31. I feel that teachers and the principal encourage parents to be involved at school.
Creo que los/as profesores/as y el/la directora/a animan a los padres y madres a implicarse con el centro.

32. I feel that parents in my teenager's school support one another.
Creo que en el centro de mi hijo los padres y madres se ayudan entre sí.

39. I talk about how my teenager is doing in school to family and friends.
Hablo con familiares y amigos sobre cómo le va a mi hijo/a en el instituto.