




# Parenting and adolescent adjustment: The mediational role of family self-esteem

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## Abstract

The present study analyzes the relationship between parental socialization practices, acceptance/involvement, and strictness/imposition, and different indicators of adolescent adjustment, taking into account the role of family self-esteem. A sample of 848 Spanish adolescents (54.70% females) ranging in age from 14 to 18 years old ( $M = 16.11$ ,  $SD = 1.10$ ) participated in the study. A series of structural equations models (SEMs) were tested to examine the mediational role of family self-esteem in the relationship between parenting practices and the outcome variables that capture adolescent adjustment: emotional instability, antisocial behavior, and academic achievement. The influence of parental practices on adolescent adjustment is expected to take place through family self-esteem. The results showed that the effect of acceptance/involvement and strictness/imposition practices on emotional instability, antisocial behavior, and academic achievement was mediated by family self-esteem. Family self-esteem eliminates the previous direct relationships between parental practices and all the adolescent adjustment variables, except the one between acceptance/involvement and emotional instability, which was reduced but not eliminated. Acceptance/involvement practices positively influence adolescents' adjustment via family self-esteem, whereas strictness/imposition practices negatively influence adolescents' adjustment via family self-esteem. This study contributes to clarifying the relationship between parental practices and adolescent adjustment, considering family self-esteem as a mediational variable rather than as an adolescent adjustment indicator. The present findings and their implications for parenting science are discussed.

**Keywords** Self-esteem · Parental practices · Adolescence adjustment · Emotional instability · Antisocial behavior · Academic achievement

## Highlights

- Little is known about the underlying mechanisms that can explain how parenting can protect or harm adolescent adjustment.
- A few scholars have proposed that family self-perceptions could mediate between parenting and adolescent adjustment.
- Findings revealed that family self-esteem mediates the relationship between parental practices and adolescent adjustment.
- Acceptance/involvement parenting practices positively influence adolescents' adjustment through family self-esteem.
- Strictness/imposition parenting practices negatively influence adolescents' adjustment through family self-esteem.

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One of the main goals of the family socialization process is to place limits on children's behavior while also developing an optimal and long-lasting parent-child relationship (Baumrind, 1983; Darling & Steinberg, 1993; Lewis, 1981). To achieve these goals, parents use different socialization styles that are shaped by the use of practices. Parenting styles have traditionally been studied using a two-dimensional model of parental behavior (Darling & Steinberg, 1993; Maccoby & Martin, 1983). The two dimensions, frequently called demandingness and responsiveness

(Baumrind, 1991; Maccoby & Martin, 1983; Steinberg, 2005), have traditionally been conceptualized as orthogonal (Darling & Steinberg, 1993; Garcia et al., 2018c; Lamborn et al., 1991; Maccoby & Martin, 1983; Steinberg et al., 1994). The demandingness dimension refers to the extent to which parents use control and supervision, make maturity demands, and maintain an assertive position of authority with their children. The responsiveness dimension represents the degree to which parents show their child warmth and acceptance, give them support, and communicate by reasoning with them (Becker, 1964; Martínez et al., 2019a; Martínez & Garcia, 2008). Recent research has enumerated the different labels used in parenting studies throughout the past century (e.g., Martinez et al., 2019b) and empirically studied the relations between them and with these two dimensions (e.g., Garcia & Gracia, 2014; Martínez et al., 2017).

Based on the degree to which parents make use of the practices that characterize these two dimensions, four parenting styles have been defined: Authoritative, indulgent, authoritarian, and neglectful. Authoritative parenting is characterized by high acceptance and involvement, using practices such as warmth and reasoning, but it is also characterized by high strictness and imposition, using practices such as privation, verbal coercion, and physical coercion. Indulgent parenting is also characterized by high acceptance and involvement, but low use of strictness and imposition practices. Authoritarian parenting is characterized by high strictness and imposition, but low acceptance and involvement, whereas neglectful parenting is characterized by low use of the practices of both the strictness/imposition and acceptance/involvement dimensions (Baumrind, 1991; Lamborn et al., 1991; Maccoby & Martin, 1983; Martinez et al., 2019a; Martínez et al., 2017; Ridao et al., 2021; Steinberg et al., 1994).

The relationship between parental practices and adolescent adjustment has been widely documented using a large variety of criteria, both internal and external (Garcia & Gracia, 2009; Garcia et al., 2018b; Garcia & Serra, 2019; Lamborn et al., 1991; Martínez et al., 2019b; Pinquart, 2017; Riquelme et al., 2018; Steinberg et al., 1994). Emergent research on parental socialization carried out in Spain (Martínez & Garcia, 2008) and other European countries, such as the UK, Sweden, Slovenia, Czech Republic (Calafat et al., 2014), Italy (Di Maggio & Zappulla, 2014), Germany (Wolfradt et al., 2003), Portugal (Rodrigues et al., 2013), Turkey (Turkel & Tezer, 2008), or Norway (Lund & Scheffels, 2019), have shown the key role of acceptance/involvement practices in adolescent adjustment. Similar results have also been found in Latin-American countries, such as Brazil (Valente et al., 2017) or Mexico (Villalobos et al., 2004). In all these countries, acceptance/involvement practices seem to be more effective

than strictness/imposition practices when using different adolescent adjustment criteria, including psychological adjustment (e.g., Martínez & Garcia, 2008; Muñoz-Rivas et al., 2019), school adjustment (e.g., Fuentes et al., 2019; Martínez et al., 2019a; Serna & Martinez, 2019), and behavioral adjustment (e.g., Garcia et al., 2020b; Martínez et al., 2013).

Thus, recent studies reinforce the idea that higher parental warmth and lower parental strictness (i.e., indulgent parenting style) are related to adolescent empathy and connectedness with nature (Musitu-Ferrer et al., 2019b), and fewer externalizing and internalizing behavior problems (Lorence et al., 2019). Indulgent parenting seems to be the best parenting style to raise aggressive adolescents (Perez-Gramaje et al., 2020). Additionally, indulgent parenting is associated with less psychological distress during emerging adulthood (Parra et al., 2019), less antisocial tendency during young adulthood (Garcia et al., 2018b), greater self-esteem, and internalization of social values during older adulthood (Garcia et al., 2018c), and the best adjustment outcomes throughout adolescence and adulthood (Garcia & Serra, 2019; Garcia et al., 2020a). Furthermore, a recent study with families from South Africa revealed that parental responsiveness based on sensitivity, warmth, acceptance, and nurturance is related to the ability to develop self-compassion during adolescence, but no relationship was found between parental demandingness and adolescent self-compassion (Dakers & Guse, 2020). Moreover, current findings have linked the indulgent style to optimal competence in adolescents in different environments and contexts, such as Spain, Germany, and the United States (Garcia et al., 2019).

Self-esteem has been one of the classical criteria for adolescent adjustment. However, its role as a mediator between parental practices and other adjustment criteria has not been explored enough in these emergent studies. Self-esteem, as the person's perception of him/herself, is formed through experiences with the environment (Kelley, 1973), and it is especially influenced by environmental reinforcements and significant others, such as parents (Shavelson et al., 1976). As the core of the individual, self-esteem has been considered essential in understanding behavioral, cognitive, emotional, and social functioning (Shavelson et al., 1976). Moreover, self-esteem has been considered a central objective of parental socialization (Grusec & Goodnow, 1994; Grusec et al., 2017), and a wide variety of studies have found it to be influenced by the specific socialization practices used by parents (Barber et al., 1992; Felson & Zielinski, 1989; Garcia et al., 2018c; Martínez & Garcia, 2007; Martínez & Garcia, 2008). When considering the multidimensionality of self-esteem, parenting practices were found to especially influence family self-esteem (e.g., Martínez & Garcia, 2007; Martínez & Garcia, 2008). Other

dimensions of self-esteem, such as the social or emotional dimensions, are secondarily influenced because all the self-esteem dimensions have been shown to be related to each other (Murgui et al., 2012). Family self-esteem reflects the adolescent's perception of their involvement, participation, and integration in the family (Garcia et al., 2018a). Moreover, self-esteem has been related to a large variety of positive psychological and behavioral outcomes, such as psychological adjustment, positive emotion, prosocial behavior (Leary & Macdonald, 2003), or engagement in school (Veiga et al., 2015).

The aim of this study is to analyze the relationships between the practices of the two parental socialization dimensions, acceptance/involvement and strictness/imposition, and different indicators of adolescent adjustment, taking into account the adolescent's family self-esteem as the pathway through which this relationship can take place. Because parenting styles are formed based on the socialization dimensions, it is important to delve into the paths through which the practices that make up these parenting styles are related to the adjustment criteria. Three indicators of adolescent adjustment—emotional, social, and academic—were considered. We focus on family self-esteem because more specific self-esteem facets correlate more highly with actual behavior than less specific facets (Byrne and Shavelson 1996), and because family self-esteem has been found to be particularly influenced by parental socialization practices (e.g., Chen et al., 2020; Martínez et al., 2017; Martínez & Garcia, 2008).

Conceptually, acceptance/involvement is represented as a latent factor captured by warmth and reasoning parental practices (see Fig. 1). Strictness/imposition is captured with verbal scolding, physical punishment, and revoking privileges practices. Family self-esteem is captured with a single indicator. Finally, emotional instability and academic achievement are captured with a single indicator, whereas

antisocial behavior is captured with two indicators: disruptive behavior and drug use.

We expect that, in the Spanish context, the influence of parental practices on adolescent adjustment takes place through self-esteem, specifically through family self-esteem. Because Spain is one of the countries where recent research has shown the advantage of acceptance/involvement practices over strictness/imposition practices (Martínez et al., 2019a; Martínez & Garcia, 2007), we expect that the use of acceptance/involvement practices (warmth, reasoning) will positively influence adolescent family self-esteem, which will result in lower emotional instability and antisocial behavior and higher academic achievement, whereas the use of strictness/imposition practices (verbal scolding, physical punishment, and revoking privileges) will negatively influence adolescent family self-esteem, which will result in higher emotional instability and antisocial behavior and lower academic achievement.

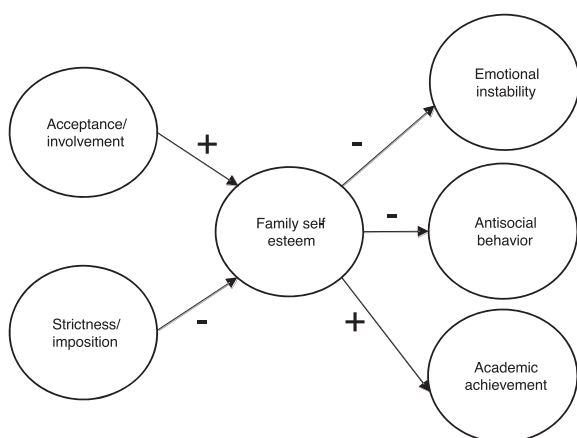
## Method

### Participants and Procedure

The sample in this study consisted of 848 adolescents from a city in Eastern Spain. Participants ranged in age from 12 to 17 years old ( $M = 16.11$ ,  $SD = 1.10$ ). Adolescent females made up 54.70% of the sample. To determine a large enough sample for the correlation tests, we conducted an a priori power analysis that showed that 826 participants were required to detect a medium (0.30) effect size ( $\eta^2 = 0.30$ ) with a power of 0.95 ( $\alpha = 0.05$ ,  $1 - \beta = 0.95$ ) (Erdfelder et al., 1996; Musitu-Ferrer et al., 2019a; Pérez et al., 1999). To achieve the a priori-determined sample, five schools were selected from a complete list of schools in the city using simple random sampling.

We intentionally over-sampled, randomly selecting 848 adolescents who (a) were Spanish, as were their parents and four grandparents, (b) lived in two-parent nuclear families, mother or primary female caregiver and father or primary male caregiver, and (c) had received their parents' permission to participate. All the questionnaires were completed anonymously following Institutional Review Board approval.

For each high school that participated in the study, their respective principals granted permission, as did each of the teachers for the use of their class time. A parent of each student also granted permission for their adolescent to participate in our study, as did each individual student. The study was administered to all students who had permission to participate. Participants did not receive any kind of compensation.



**Fig. 1** Conceptual model with predictor, mediator, and outcome variables

## Measures

### Parenting dimensions

Acceptance/involvement and strictness/imposition dimensions were captured with the Parental Socialization Scale (ESPA29; Musitu & Garcia, 2001). The ESPA29 scale describes 29 scenarios that are representative of everyday family life, divided into 13 that represent compliance situations where the adolescent acts in accordance with the family norms, and 16 that represent noncompliance situations where the adolescent does not conform to family norms. In compliance situations, adolescents rate practices of warmth (e.g., “If the school reports that I am well-behaved...he/she shows me warmth”) and indifference (e.g., “If the school reports that I am well-behaved...he/she seems indifferent”). In noncompliance situations, adolescents rate practices of reasoning (e.g., “If I leave home to go somewhere without asking anyone for permission...he/she talks to me”), detachment (e.g., “If I leave home to go somewhere without asking anyone for permission...it’s the same to him/her”), verbal scolding (e.g., “If I leave home to go somewhere without asking anyone for permission...he/she scolds me”), physical punishment (e.g., “If I leave home to go somewhere without asking anyone for permission...he/she spans me”), and revoking privileges (e.g., “If I leave home to go somewhere without asking anyone for permission...he/she takes something away from me”). Several studies in different cultural contexts have confirmed the invariance of the factorial structure across parental sex and adolescent sex and age (del Milagro Aymerich et al., 2018; Martínez et al., 2011; Martínez et al., 2017). The acceptance/involvement dimension was composed of warmth and reasoning subscales. The strictness/imposition dimension was composed of the verbal scolding, physical punishment, and revoking privileges subscales. All parenting practices were rated on a 4-point scale ranging from 1 (never) to 4 (always). The alpha value for each subscale was: Warmth, 0.94, reasoning, 0.94, verbal scolding, 0.95, physical punishment, 0.95, and revoking privileges, 0.94.

**Family self-esteem** was captured with the family items of the Multidimensional Self-Esteem Scale (AF5; Garcia & Musitu, 1999). The AF5 family subscale comprises 6 items that evaluate family self-esteem (e.g., “My parents give me a lot of confidence”). All items were rated on a 99-point scale ranging from 1 (strongly disagree) to 99 (strongly agree). The factorial structure of the AF5 has been confirmed in Spain (Murgui et al., 2012) and other countries (Garcia et al., 2013), using exploratory (Garcia & Musitu, 1999) and confirmatory factor analyses (CFA) (Chen et al., 2020; Garcia et al., 2018a; Garcia et al., 2011; Tomás & Oliver, 2004). Furthermore, no method effect has been related to negatively worded items (Garcia et al., 2011;

Tomás & Oliver, 2004). The alpha value was 0.87 in the present study.

**Emotional instability** was captured with the emotional subscale of the Personality Assessment Questionnaire (PAQ; Rohner, 1990). The emotional instability PAQ subscale includes 6 items that assess the way adolescents perceive their own emotional traits as unstable (e.g., “I get upset when things go wrong”). All items were rated on a 4-point scale ranging from 1 (almost never true) to 4 (almost always true). The alpha value was 0.78.

**Antisocial behavior** was captured with two indexes: disruptive behavior and drug use (Galdós & Sánchez, 2010; Garcia & Gracia, 2009; Martínez et al., 2013; Saiz et al., 2011). Disruptive behavior was captured with 13 items that assessed behaviors such as cheating, copying homework, and tardiness (e.g., “I try to copy during exams”). Drug use was captured with 4 items that assessed the frequency of involvement with cigarettes, alcohol, marijuana, and other drugs in the past weeks (e.g., “In recent weeks, have you drunk alcohol?”). Disruptive behavior and drug use items were rated on a 5-point scale ranging from 1 (never) to 5 (frequently). The alpha value for disruptive behavior was 0.78, and for drug use, 0.75.

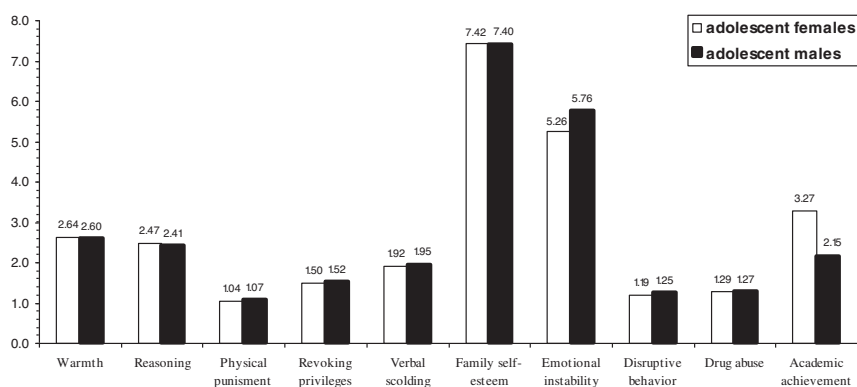
**Academic achievement** was captured with the grade point average, which was obtained from student files. Scores ranged from 0 to 10 (Spanish numerical standard) and were converted to the grade standard in the USA, ranging from 0 (all F’s) to 4 (all A’s) (see Garcia & Gracia, 2009; Lamborn et al., 1991).

### Plan of Analysis

First, to explore differences between sexes, as is common in parenting studies (Garcia et al., 2019; Martínez et al., 2019b), a factorial multivariate analysis of variance (MANOVA) was performed on the predictor variables (warmth, reasoning, verbal scolding, physical punishment, and revoking privileges), the mediation variable (family self-esteem), and the outcome variables (emotional instability, disruptive behavior, drug use, and academic achievement), with sex (men vs. women) as the independent variable. Univariate *F* follow-up tests were conducted within the overall multivariate significant differences.

Next, correlation analysis was performed to evaluate whether the analyzed variables were related to each other. Then, a series of structural equation models (SEMs) were tested to examine the mediational role of family self-esteem in the relationship between parenting practices and the outcome variables that capture adolescents’ adjustment. We calculated different SEMs to examine the relationship between outcome variables and predictors (see Fig. 1), with and without considering the mediating role of family self-esteem. We performed the causal steps approach

**Fig. 2** Means for adolescent females and males for all variables analyzed



**Table 1** Correlations, means, and standard deviations of the predictor, mediator, and outcome variables

|                          | 1       | 2       | 3       | 4       | 5       | 6       | 7      | 8       | 9       |
|--------------------------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| 1. Warmth                | 1.00    |         |         |         |         |         |        |         |         |
| 2. Reasoning             | 0.54**  | 1.00    |         |         |         |         |        |         |         |
| 3. Verbal Scolding       | -0.14** | -0.08*  | 1.00    |         |         |         |        |         |         |
| 4. Physical Punishment   | -0.13** | -0.12** | 0.29**  | 1.00    |         |         |        |         |         |
| 5. Revoking Privileges   | 0.01    | -0.25** | 0.57**  | 0.28**  | 1.00    |         |        |         |         |
| 6. Family self-esteem    | 0.53**  | 0.37**  | -0.35** | -0.32** | -0.18** | 1.00    |        |         |         |
| 7. Emotional instability | -0.07*  | -0.06   | 0.08*   | 0.02    | 0.02    | -0.08*  | 1.00   |         |         |
| 8. Disruptive behavior   | -0.17** | -0.17** | 0.04    | 0.20**  | 0.04    | -0.27** | 0.10** | 1.00    |         |
| 9. Drug use              | -0.02   | -0.09** | 0.01    | 0.15**  | 0.01    | -0.18** | 0.09*  | 0.50**  | 1.00    |
| 10. Academic achievement | 0.07    | 0.16**  | -0.01   | -0.12** | -0.03   | 0.22**  | 0.05   | -0.37** | -0.32** |
| <i>M</i>                 | 2.41    | 2.60    | 1.95    | 1.10    | 1.52    | 7.40    | 6.26   | 1.25    | 1.28    |
| <i>SD</i>                | 0.79    | 0.67    | 0.67    | 0.19    | 0.51    | 2.11    | 1.95   | 1.29    | 0.55    |

\*\**p* < 0.001; \**p* < 0.05

(Holmbeck, 1997), according to which a variable must meet the following three conditions to be considered a mediator: (1) the fit of the overall model when the outcome variables are regressed on the predictors has to be good, and the path coefficients have to be significant (Model 1 or A-C Model); (2) the fit of the overall model when the outcomes variables are regressed on the mediators and the mediators are simultaneously regressed on the predictors with the paths between predictors and outcome variables constrained to zero has to be good, and the path coefficients also have to be significant (Model 2 or Constrained A-B-C Model); and (3) the fit of the overall model with the paths between predictors and outcome variables not constrained to zero has to be significant. If there is a mediational effect, the addition of the paths between predictors and outcomes in the unconstrained model should not significantly improve the fit compared to the constrained model (Model 3 or Unconstrained A-B-C Model). Finally, a multi-group analysis by sex was calculated to analyze the role of the mediator variable (family self-esteem) in both sexes.

SEMs were calculated with EQS 6.1 (Bentler, 1995) using the maximum likelihood robust estimation method,

due to the deviation of the multinormal data. To assess the overall fit of the models, we used the value of chi-squared and other fit indexes that have the advantage of pre-established cut-off criteria (e.g., Cheung & Rensvold, 2002; Fuentes et al., 2011; Garcia et al., 2011; Murgui et al., 2012). We calculated the following indexes:  $\chi^2/df$ , a score of 2.00–3.00 or lower is indicative of a good fit; root mean squared error of approximation (RMSEA), values lower than 0.08 are considered acceptable; the standardized root mean square residual (SRMR), whose value must be lower than 0.10; the goodness of fit index (GFI) and the comparative fit index (CFI), whose values must exceed 0.90. The estimation method was maximum likelihood (ML), which, although it assumes multivariate normality, is reasonably robust to non-compliance (Curran et al. 1996). The criteria used are in line with those proposed by Hu and Bentler (1999) and Kline (1998), and they are typically utilized in this type of analysis (Jimenez et al., 2014; Martínez et al., 2012).

In order to obtain a significance test of the comparison of Model 2 and Model 3, a Log-likelihood Chi-Square Difference Test was performed. Fulfilment of these conditions

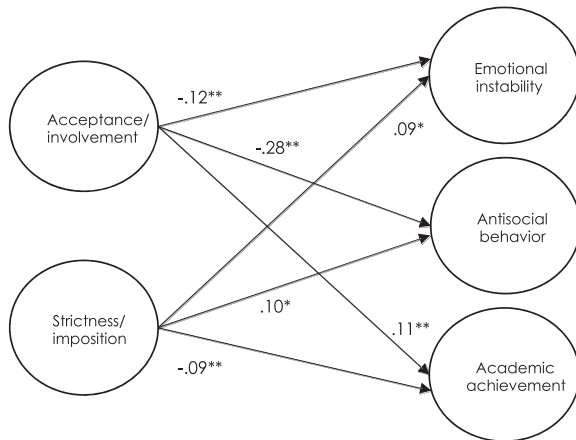


**Table 2** Fit indexes of Models 1, 2 and 3

|         | S-B $\chi^2$ | df | $\chi^2/df$ | RCFI | GFI  | SRMR  | RMSEA (90% CI)      |
|---------|--------------|----|-------------|------|------|-------|---------------------|
| Model 1 | 38.43**      | 15 | 2.56        | 0.98 | 0.99 | 0.026 | 0.043 (0.026 0.060) |
| Model 2 | 99.66**      | 21 | 4.74        | 0.95 | 0.98 | 0.049 | 0.067 (0.054 0.080) |
| Model 3 | 74.58**      | 20 | 3.73        | 0.97 | 0.98 | 0.044 | 0.057 (0.043 0.071) |

S–B  $\chi^2$  Satorra–Bentler Chi square, RCFI Robust comparative fit index, GFI Goodness of fit index, SRMR Standardized root mean square, RMSEA Root mean square error of approximation residual

\* $p < 0.05$ , \*\* $p < 0.01$

**Fig. 3** Standardized structural equation of Model 1

shows complete mediation. Finally, we calculated the significance of the indirect effects (Mackinnon & Dwyer, 1993) in order to evaluate the magnitude of the relationships between predictors and outcome variables. When condition 3 was satisfied (i.e., the path between a predictor and an outcome is non-significant), the indirect effect was calculated in Model 2. In all other cases, the indirect effect was calculated in Model 3.

## Results

### Preliminary Analysis

Multivariate analysis results showed a significant main effect for sex,  $\Lambda = 0.853$ ,  $F(10.0, 837.0) = 14.37$ ,  $p < 0.001$ . Adolescent males scored lower on parental warmth,  $F(1, 846) = 5.31$ ,  $p < 0.05$ , but higher on parental physical punishment,  $F(1, 846) = 7.32$ ,  $p < 0.001$ . Moreover, adolescent females had higher scores than adolescent males on emotional instability,  $F(1, 846) = 72.82$ ,  $p < 0.001$ , and academic achievement,  $F(1, 846) = 13.09$ ,  $p < 0.001$ , whereas disruptive behavior,  $F(1, 846) = 35.31$ ,  $p < 0.001$ , was higher in adolescent males (see Fig. 2). Thus, adolescent males and females showed the usual pattern of mean differences in socialization practices and psychological adjustment studies (Garcia & Gracia, 2009, 2010; Martínez et al., 2019b; Martínez et al., 2020).

The correlations between the variables were calculated (see Table 1), verifying that the model variables were related to each other. The parental practices of the acceptance/involvement dimension, warmth and reasoning, were positively related to each other, and both practices were negatively related to the parental practices of verbal scolding, physical punishment, and in the case of reasoning, revoking privileges. Furthermore, warmth and reasoning practices were positively related to family self-esteem. Warmth was negatively related to emotional instability and disruptive behavior, whereas reasoning was negatively related to disruptive behavior and drug use, and positively related to academic achievement. The parental practices of the strictness/imposition dimension, verbal scolding, physical punishment, and revoking privileges, were positively related to each other and negatively related to family self-esteem. Furthermore, verbal scolding was positively related to emotional instability, whereas physical punishment was positively related to disruptive behavior and drug use and negatively related to academic achievement.

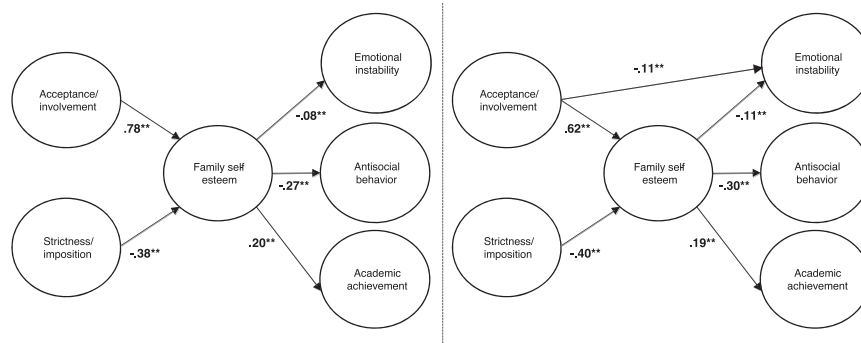
Family self-esteem was negatively related to emotional instability, disruptive behavior, and drug use, and positively related to academic achievement. Finally, emotional instability, disruptive behavior, and drug use were positively related to each other, whereas academic achievement was negatively related to disruptive behavior and drug use.

### Structural Model

The proposed structural model consisted of six latent factors, each derived from several observable indicators or variables: (1) acceptance/involvement parental dimension, composed of two indicators, warmth and reasoning practices; (2) strictness/imposition parental dimension, captured with three indicators, verbal scolding, physical punishment, and revoking privileges practices; (3) family self-esteem, captured with one indicator, the score on the family self-esteem subscale; (4) emotional instability captured with one indicator, the score on the PAQ subscale; (5) antisocial behavior, composed of two indicators, disruptive behavior and drug use; and (6) academic achievement, captured with one indicator, grade point average.

To test the hypothesis that self-esteem mediates the relationship between parental dimensions (acceptance/

**Fig. 4** Standardized structural equation of Model 2 (left side) and Model 3 (right side)



involvement and strictness/imposition) and outcome variables (emotional instability, antisocial behavior, and academic achievement), a series of structural models were performed through the causal steps approach (Holmbeck, 1997). All the models included correlations between parental practices and the three outcomes variables (emotional instability, antisocial behavior, and academic achievement). Model 1 was calculated by analyzing the direct relationships between the parental dimensions and the three outcome variables. Given Mardia's value (5.57), we calculated the robust versions of the aforementioned indexes. The fit of Model 1, which included the correlations between the parental dimensions, and between academic achievement and antisocial behavior ( $r = -0.424$ ;  $p < 0.001$ ), was good (see Table 2). Parental dimensions were related to all the outcome variables in the predicted directions (see Fig. 3). Acceptance/involvement was negatively related to emotional instability and antisocial behavior, and positively related to academic achievement. Strictness/imposition was positively related to emotional instability and antisocial behavior, and negatively related to academic achievement.

Then, the model was expanded to include family self-esteem at its core. Model 2 included the new paths between the parental dimensions (acceptance/involvement and strictness/imposition) and family self-esteem, and between family self-esteem and the outcome variables (emotional instability, antisocial behavior, and academic achievement). Model 2 presented optimum fit indexes (Table 2), especially improving the RMSEA and  $\chi^2$  values, as well as resulting in relations in the expected direction. Acceptance/involvement was positively related to family self-esteem,  $\beta = 0.62$ ,  $p < 0.001$ , whereas strictness/imposition was negatively related to family self-esteem,  $\beta = -0.40$ ;  $p < 0.001$  (see solid lines in Fig. 4). Additionally, family self-esteem was related to the outcome variables: negatively to emotional instability,  $\beta = -0.11$ ,  $p < 0.01$ , and antisocial behavior,  $\beta = -0.30$ ,  $p < 0.001$ , and positively to academic achievement,  $\beta = 0.19$ ,  $p < 0.001$ .

In a final analysis, we tested Model 3, which was similar to Model 2 except that the direct paths between predictors and outcomes were also examined: each direct effect of the

two parental dimensions on the outcomes was computed to check whether it was significant. Only the relationship between acceptance/involvement and emotional instability was included in the final Model 3 (see dashed line in Fig. 4) because it yielded a significantly better fit to the data than Model 2,  $\Delta\chi^2(1) = 25.08$ ,  $p < 0.01$ .

In Model 2, the indirect effect of acceptance/involvement is negative on antisocial behavior,  $\beta = -0.21$ ,  $p < 0.001$ , and positive on academic achievement,  $\beta = 0.18$ ,  $p < 0.01$ ; inversely, the indirect effect of strictness/imposition is positive on antisocial behavior,  $\beta = 0.10$ ,  $p < 0.001$ , and emotional instability,  $\beta = 0.03$ ,  $p < 0.05$ , but negative on academic achievement,  $\beta = -0.08$ ,  $p < 0.001$ . The indirect effect of acceptance/involvement on emotional instability, which was significant,  $\beta = 0.25$ ,  $p < 0.001$ , was calculated in Model 3 (Fig. 4).

Finally, in order to evaluate whether the relationships between predictors, mediator, and outcomes variables were equivalent by sex, two versions of Model 3 were calculated. The unrestricted model showed a good fit, Model 3U, CFI = 0.96, GFI = 0.97, SRMR = 0.056,  $\chi^2(40) = 111.63$ . The difference between Model 3U and the restricted Model 3R, with betas values constrained by sex, CFI = 0.96, GFI = 0.97, SRMR = 0.059, was not significant,  $\Delta\chi^2(6) = 8.72$ ,  $p > 0.05$ . Thus, Model 3 was equivalent between sexes. The mediation of family self-esteem was full in the relationship between parental dimensions and both antisocial behavior and academic achievement. Therefore, when family self-esteem was controlled for, the associations between parental dimensions and antisocial behavior and academic achievement became non-significant. The mediation of family self-esteem in the relationship between strictness/imposition practices and emotional instability was also full.

There was a partial mediation of family self-esteem in the relationship between acceptance/involvement and emotional instability. When family self-esteem was controlled for, the associations between acceptance/involvement and emotional instability remained significant, showing that acceptance/involvement still had a direct effect on emotional instability. Taken together, the results in Model 3 support the mediation hypothesis outlined because family

self-esteem either eliminated or reduced the previous relationships between the parental dimensions and the outcome variables.

## Discussion

Results confirm the mediating role of family self-esteem in the relationship between parental practices and adolescent adjustment in Spain. Although the analysis shows that the practices of acceptance/involvement and strictness/imposition are related to all the adolescent adjustment variables in the study (emotional instability, antisocial behavior, and academic achievement), the mediation of family self-esteem explains this relationship to a large degree. The use of acceptance/involvement practices was related to higher adolescent adjustment. This dimension was positively related to academic achievement and negatively related to emotional instability and antisocial behavior, consistent with previous research (Garcia & Gracia, 2010; Martínez et al., 2013; Serna & Martinez, 2019). However, the relationship between acceptance/involvement practices and antisocial behavior and academic achievement is completely mediated by family self-esteem. The use of these practices has a positive effect on adolescent family self-esteem, which in turn leads to less anti-social behavior and positively affects academic achievement. Finally, the relationship between acceptance/involvement practices and emotional instability is the only one that is partially mediated by family self-esteem. Although the effect of acceptance/involvement practices on family self-esteem reduces the individual's emotional instability, there is also a direct effect of acceptance/involvement practices on emotional instability.

Moreover, the use of strictness/imposition practices was related to lower adolescent adjustment: this dimension was positively related to emotional instability and antisocial behavior, and negatively related to academic achievement, consistent with previous research (Garcia & Gracia, 2010; Martínez et al., 2013). Nevertheless, the relationship between strictness/imposition practices and all the adolescent adjustment criteria is fully mediated by family self-esteem. The use of these practices has a negative effect on adolescents' family self-esteem, which leads to higher emotional instability and anti-social behavior and lower academic achievement.

It is important to note that although the consideration of family self-esteem does not change the direction of the relationship between parental practices and adolescent adjustment, the intensity of this main relation is increased. Thus, the key role of family self-esteem in the relationship between parenting practices and adolescent adjustment is shown. In short, parents' influence on adolescents'

adjustment behavior occurs basically through self-esteem, and specifically through family self-esteem, because it is related to parents' behavior. Furthermore, to maintain high family self-esteem, warmth and reasoning practices seem to be essential. Parenting represents the family emotional context where parents try to achieve their main socialization goals. Moreover, family self-esteem represents children's perceptions of themselves as valued and appreciated members of their family (Darling and Steinberg, 1993; Perez-Gramaje et al., 2020). Not all parenting practices contribute to children's perception of themselves as valued and loved members of their family. For example, authoritarian parenting (no warmth or strictness) is related to weak family self-esteem.

The positive effect of acceptance/involvement practices on adolescent adjustment via family self-esteem is consistent with previous research that points to indulgent parenting, characterized by the parents' use of these practices, as the optimal parental socialization style in Spain (Garcia & Gracia, 2009; Martínez et al., 2019b). Moreover, it should be noted that, according to the main findings from structural models 2 and 3, the positive effect of the acceptance/involvement practices on adolescent adjustment via family self-esteem is higher than the negative effect of the strictness/imposition practices on adolescent adjustment via family self-esteem. This positive effect of acceptance/involvement on family self-esteem is the key to understanding the relationship between indulgent and authoritative parenting (both characterized by high use of those practices) and adolescent adjustment found in recent parenting studies carried out in European countries such as Spain and other cultural contexts (e.g., Fuentes et al., 2015; Garcia et al., 2019; Martínez & Garcia, 2008; Muñoz-Rivas et al., 2019). Parental strictness seems to be unnecessary or even harmful for adolescent adjustment (Garcia & Serna, 2019; Martínez et al., 2019b; Parra et al., 2019). When examining the two parenting styles characterized by the use of acceptance/involvement (indulgent and authoritative styles), indulgent parenting (also characterized by non-strictness) is related to equal or even better adolescent adjustment than authoritative parenting (also characterized by strictness). In contrast, parenting styles characterized by lack of acceptance/involvement (authoritarian and neglectful styles) are consistently related to poor developmental outcomes (Lorence et al., 2019; Musitu-Ferrer et al., 2019b).

Parental socialization develops in the family context. However, many different processes take place within the home, some of which are not always beneficial for family members, such as marital conflict (Cummings & Davies, 1994; Ding et al., 2019) or even intimate partner violence (Gracia et al., 2014; Lila et al., 2013). Additionally, other influences outside the home (e.g., school) can affect child



and adolescent development (Eccles et al., 1993; Musitu-Ferrer et al., 2019b; Villarejo et al., 2020). For many decades, the so-called parenting science has aimed to identify the different patterns of parenting and their impact on child and adolescent competence (Darling & Steinberg, 1993; Maccoby & Martin, 1983; Martinez-Escudero et al., 2020). Parenting strategies are very different, but they can be organized in two different orthogonal dimensions: responsiveness (also labeled acceptance/involvement) and demandingness (also labeled strictness/imposition). Agreeing with some previous research conducted in European countries based on the parenting style approach (Garcia et al., 2019; Martinez et al., 2020; Queiroz et al., 2020), findings from the present study revealed a different impact of parenting on adolescent outcomes (antisocial behavior, emotional instability, and academic achievement): acceptance/involvement was associated with benefits, but strictness/imposition was not. However, less is known about the underlying mechanisms that can explain how parenting can both protect and harm adolescent competence.

Only a few scholars have proposed a possible underlying mechanism to specifically understand parenting's different consequences for child competence depending on the cultural context (Baumrind, 1996; Deater-Deckard et al., 1996). For example, authoritarian parenting has a harmful impact on European-American children, but not on African-Americans. Thus, some authors have proposed that the former may perceive that their authoritarian family does not love them and is intrusive (European-Americans), whereas the latter may perceive that their authoritarian family cares for and protects them (African-Americans) (Baumrind, 1996; Deater-Deckard et al., 1996). Therefore, it is possible that self-perceptions of the family could mediate between parenting and its effects on child and adolescent competence, but this point has not been examined in previous family studies. Previous studies have examined self-esteem (global or multidimensional) as an outcome of parenting (e.g., Calafat et al., 2014; Garcia & Gracia, 2009). By contrast, the present study revealed the importance of family self-esteem as a possible underlying mechanism that can explain parenting's positive or negative impact on adolescent competence, offering interesting new data from mediational analysis.

Self-esteem can be defined as a single global dimension (Baumeister et al., 2003; Rosenberg, 1965). However, based on the multidimensional and hierarchical approach proposed by Shavelson (Shavelson et al., 1976), self-esteem is usually conceptualized as a multidimensional construct with different but related domains (i.e., non-orthogonal). Empirical support for different related dimensions of self-esteem (e.g., family, emotional, or academic/professional) has been obtained through CFA analysis (Fuentes et al., 2020; Garcia et al., 2011). Family self-esteem refers to

self-perceptions about feeling loved and appreciated by the family. Some previous studies also have identified some benefits of family self-esteem, such as positive peer relationships (Lopez et al., 2006), less aggression (Perez-Gramaje et al., 2020), or protection against risk behaviors related to substance use, bullying, suicidality, and sexuality (Wild et al., 2004). The results of the present study also confirmed the benefits of family self-esteem for adolescent competence: greater family self-esteem is related to less emotional instability and antisocial behavior and higher academic achievement.

Although there is a strong connection between family self-esteem and parental socialization (i.e., warmth and strictness), self-esteem and its family component are also affected by different influences within and outside the home (Bronfenbrenner, 1986), such as parent-adolescent conflict (Kuhlberg et al., 2010), family functioning (Jiménez et al., 2008), family cohesion (Cooper et al., 1983), high-conflict divorce (van der Wal et al., 2019), sibling relationships (Steinberg & Morris, 2001), peer support (Portt et al., 2020), bullying victimization (Martínez et al., 2019b), and even the cultural context (Chen et al., 2020; Triandis, 1989). Interestingly, despite intra- and extra-familial influences, a common pattern was found between parenting (warmth and strictness) and adolescent competence through family self-esteem as a mediational variable. Parental warmth has been positively related to family self-esteem, whereas parental strictness has been negatively related to family self-esteem. Family self-esteem, in turn, has a protective effect on adolescent competence, providing protection against antisocial behavior and emotional instability and fostering academic achievement. Family studies have suggested that the impact (positive or negative) of family on child and adolescent psychosocial competence could be through self-perceptions (Lord et al., 1994; Wigfield et al., 1991). It is possible that adolescents with good self-perceptions in the family domain (i.e., family self-esteem) feel loved, valued, and reassured, and have a sense of belonging to a family (theirs), which could favor their emotional, social, and school adjustment (Belsky, 1981; Leary & Downs, 1995).

Finally, the analysis also presents some differences depending on the adolescent's sex that are consistent with previous research. Specifically, parents tend to be warmer with adolescent females than with adolescent males, and they tend to use more physical punishment with adolescent males than with adolescent females (del Milagro Aymerich et al., 2018; Martínez et al., 2012). Moreover, there are other sex-related differences in the adjustment criteria; adolescent females present more emotional instability and higher academic achievement than adolescent males, whereas males present more disruptive behavior than females (Garcia et al., 2018b; Perez-Gramaje et al., 2020; Riquelme et al., 2018). However, despite these differences,

the results of the multigroup analysis show that the mediational role of family self-esteem in the relationship between parental practices and adolescent adjustment is not affected by the adolescent's sex. Thus, the requisites for invariance are met (Fuentes et al., 2020; Garcia et al., 2018b; Steinmayr et al., 2019).

Some limitations should be considered. The use of self-report instruments should be taken into account, although adolescents' reports have been found to show less social desirability bias than parents' reports (Barry et al., 2008). Additionally, similar results on optimal parenting were obtained when adolescents and parents provided parenting reports separately (e.g., Aunola et al., 2000). Additionally, ratings of mother and fathers were averaged, although this strategy is quite frequent in studies on two-parent households if the main objective is to identify the best parenting (e.g., see Lamborn et al., 1991, p. 1052). Moreover, the cross-sectional nature of the present data should be taken into account, and the conclusions on causality should be confirmed in a longitudinal study, despite providing evidence coinciding with the previous literature. Finally, the conceptual model was designed considering the theoretical framework, although it might be possible to analyze different SEM models with the same constructs and observed variables.

Future research in other cultural contexts and studies using other adjustment criteria are needed, in order to extend the empirical evidence about the positive or negative impact of acceptance/involvement and strictness/imposition parenting practices on self-esteem and adolescent adjustment in the Digital Society (Dakers & Guse, 2020; Garcia et al., 2019b; Martínez et al., 2019b). In any case, this study adds new evidence about the importance of family self-esteem as a regulator of behavior and psychological welfare (Markus & Wurf, 1987) in the relationship between parenting practices and adolescent adjustment. The results of the study have educational implications in the family context: families should be aware of the importance of promoting the adolescents' self-esteem through the use of practices such as reasoning and warmth because this would have a positive effect on their emotional, behavioral, and academic adjustment.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Ethical Approval** The Ethics Committee at the University of University of Castilla-La Mancha, where the research was designed, granted ethical approval for the study.

**Informed Consent** Parents or legal guardians of the participants gave their informed consent for the adolescents to participate, and all the adolescents agreed to participate.

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## References

- Aunola, K., Stattin, H., & Nurmi, J. E. (2000). Parenting styles and adolescents' achievement strategies. *Journal of Adolescence*, 23, 205–222. <https://doi.org/10.1006/jado.2000.0308>.
- Barber, B. K., Chadwick, B. A., & Oerter, R. (1992). Parental behaviors and adolescent self-esteem in the United-States and Germany. *Journal of Marriage and Family*, 54, 128–141. <https://doi.org/10.2307/353281>.
- Barry, C. T., Frick, P. J., & Grafeman, S. J. (2008). Child versus parent reports of parenting practices: Implications for the conceptualization of child behavioral and emotional problems. *Assessment*, 15(3), 294–303. <https://doi.org/10.1177/1073191107312212>.
- Baumeister, R. F., Campbell, J. D., Krueger, J. I. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, Supplement*, 4(1), 1–44. <https://doi.org/10.1111/1529-1006.01431>.
- Baumrind, D. (1983). Rejoinder to Lewis reinterpretation of parental firm control effects: are authoritative families really harmonious? *Psychological Bulletin*, 94, 132–142. <https://doi.org/10.1037/0033-2909.94.1.132>.
- Baumrind, D. (1991). Effective parenting during the early adolescent transition. In P. A. Cowan, & E. M. Herington (Eds.), *Advances in family research series. Family transitions* (pp. 111–163). Lawrence Erlbaum Associates, Inc.
- Baumrind, D. (1996). The discipline controversy revisited. *Family Relations*, 45, 405–414. <https://doi.org/10.2307/585170>.
- Becker, W. C. (1964). Consequences of different kinds of parental discipline. In M. L. Hoffman, & L. W. Hoffman (Eds.), *Review of child development research* (pp. 169–208). Russell Sage Foundation.
- Belsky, J. (1981). Early human experience: a family perspective. *Developmental Psychology*, 17(1), 3–23. <https://doi.org/10.1037/0012-1649.17.1.3>.
- Bentler, P. M. (1995). *EQS Structural Equations Program Manual*. Multivariate Software.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723–742. <https://doi.org/10.1037/0012-1649.22.6.723>.
- Byrne, B. M., & Shavelson, R. J. (1996). On the structure of social self-concept for pre-, early, and late adolescents: A test of the Shavelson, Hubner, and Stanton (1976) model. *Journal of Personality and Social Psychology*, 70, 599–613. <https://doi.org/10.1037/0022-3514.70.3.599>.
- Calafat, A., Garcia, F., Juan, M., Becoña, E., & Fernández-Hermida, J. R. (2014). Which parenting style is more protective against adolescent substance use? Evidence within the European context. *Drug and Alcohol Dependence*, 138, 185–192. <https://doi.org/10.1016/j.drugalcdep.2014.02.705>.
- Chen, F., Garcia, O. F., Fuentes, M. C., Garcia-Ros, R., & Garcia, F. (2020). Self-concept in China: Validation of the Chinese version of the Five-Factor Self-Concept (AF5) Questionnaire. *Symmetry*, 12(5), 798. <https://doi.org/10.3390/sym12050798>.

- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating Goodness-of-Fit Indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233–255. [https://doi.org/10.1207/S15328007SEM0902\\_5](https://doi.org/10.1207/S15328007SEM0902_5).
- Cooper, J. E., Holman, J., & Braithwaite, V. A. (1983). Self-esteem and family cohesion: the child's perspective and adjustment. *Journal of Marriage and the Family*, 45(1), 153–159. <https://doi.org/10.2307/351303>.
- Cummings, E. M., & Davies, P. (1994). *Children and marital conflict: The impact of family dispute and resolution*. Guilford Press.
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29. <https://doi.org/10.1037/1082-989X.1.1.16>.
- Dakers, J., & Guse, T. (2020). Can dimensions of parenting style contribute to self-compassion among South African adolescents? *Journal of Family Studies*. <https://doi.org/10.1080/13229400.2020.1852951>.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological Bulletin*, 113(3), 487–496. <https://doi.org/10.1037/0033-2909.113.3.487>.
- Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1996). Physical discipline among African American and European American mothers: Links to children's externalizing behaviors. *Developmental Psychology*, 32(6), 1065–1072. <https://doi.org/10.1037/0012-1649.32.6.1065>.
- del Milagro Aymerich, M., Musitu, G., & Palmero, F. (2018). Family socialisation styles and hostility in the adolescent population. *Sustainability*, 10(9), 2962. <https://doi.org/10.3390/su10092962>.
- Di Maggio, R., & Zappulla, C. (2014). Mothering, fathering, and Italian adolescents' problem behaviors and life satisfaction: dimensional and typological approach. *Journal of Child and Family Studies*, 23(3), 567–580. <https://doi.org/10.1007/s10826-013-9721-6>.
- Ding, W., Lin, X., Su, J., Jiang, Y., Wu, Q., & He, T. (2019). The mutual influence between marital quality and child oppositional defiant disorder symptoms in Chinese families: do child and parent's gender matter? *Journal of Child and Family Studies*, 28(8), 2086–2097. <https://doi.org/10.1007/s10826-019-01408-6>.
- Eccles, J., Midgley, C., Wigfield, A., Buchanan, C., Reuman, D., Flanagan, C., & Maciver, D. (1993). Development during adolescence - the impact of stage-environment fit on young adolescents experiences in schools and in families. *American Psychologist*, 48(2), 90–101. <https://doi.org/10.1037//0003-066X.48.2.90>.
- Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments and Computers*, 28, 1–11. <https://doi.org/10.3758/BF03203630>.
- Felson, R. B., & Zielinski, M. A. (1989). Childrens self-esteem and parental support. *Journal of Marriage and Family*, 51, 727–735. <https://doi.org/10.2307/352171>.
- Fuentes, M. C., Alarcón, A., Garcia, F., & Gracia, E. (2015). Use of alcohol, tobacco, cannabis and other drugs in adolescence: effects of family and neighborhood. *Anales de Psicología*, 31(3), 1000–1007. <https://doi.org/10.6018/analesps.31.3.183491>.
- Fuentes, M. C., Garcia, F., Gracia, E., & Lila, M. (2011). Self-concept and drug use in adolescence. *Adicciones*, 23(3), 237–248. <https://doi.org/10.20882/adicciones.148>.
- Fuentes, M. C., Garcia, O. F., & Garcia, F. (2020). Protective and risk factors for adolescent substance use in Spain: self-esteem and other indicators of personal well-being and ill-being. *Sustainability*, 12(15), 5962. <https://doi.org/10.3390/su12155962>.
- Fuentes, M. C., Garcia-Ros, R., Perez-Gonzalez, F., & Sancerni, D. (2019). Effects of parenting styles on self-regulated learning and academic stress in Spanish adolescents. *International Journal of Environmental Research and Public Health*, 16(15), 2778. <https://doi.org/10.3390/ijerph16152778>.
- Galdós, J. S., & Sánchez, I. M. (2010). Relationship between cocaine dependence treatment and personal values of openness to change and conservation [Relación del tratamiento por dependencia de la cocaína con los valores personales de apertura al cambio y conservación]. *Adicciones*, 22(1), 51–58. <https://doi.org/10.20882/adicciones.214>.
- García, F., & Gracia, E. (2009). Is always authoritative the optimum parenting style? Evidence from Spanish families. *Adolescence*, 44(173), 101–131. <http://www.ncbi.nlm.nih.gov/pubmed/33076230>.
- García, F., & Gracia, E. (2010). What is the optimum parental socialisation style in Spain? A study with children and adolescents aged 10-14 years. *Infancia y Aprendizaje*, 33(3), 365–384. <https://doi.org/10.1174/021037010792215118>.
- García, F., & Gracia, E. (2014). The indulgent parenting style and developmental outcomes in South European and Latin American countries. In H. Selin (Ed.), *Parenting across cultures* (pp. 419–433). Springer. [https://doi.org/10.1007/978-94-007-7503-9\\_31](https://doi.org/10.1007/978-94-007-7503-9_31).
- García, F., & Musitu, G. (1999). *AF5: Self-concept form 5 [AF5: Autoconcepto Forma 5]*. TEA editions.
- García, F., Gracia, E., & Zeleznova, A. (2013). Validation of the english version of the five-factor self-concept questionnaire. *Psicothema*, 25(4), 549–555. <https://doi.org/10.7334/psicothema.2013.33>.
- García, F., Martínez, I., Balluerka, N., Cruise, E., Garcia, O. F., & Serra, E. (2018a). Validation of the five-factor self-concept questionnaire AF5 in Brazil: Testing factor structure and measurement invariance across language (Brazilian and Spanish), gender, and age. *Frontiers in Psychology*, 9, 2250. <https://doi.org/10.3389/fpsyg.2018.02250>.
- García, F., Serra, E., Garcia, O. F., Martinez, I., & Cruise, E. (2019). A third emerging stage for the current digital society? Optimal parenting styles in Spain, the United States, Germany, and Brazil. *International Journal of Environmental Research and Public Health*, 16(13), 2333. <https://doi.org/10.3390/ijerph16132333>.
- García, J. F., Musitu, G., Riquelme, E., & Riquelme, P. (2011). A confirmatory factor analysis of the “Autoconcepto Forma 5” questionnaire in young adults from Spain and Chile. *Spanish Journal of Psychology*, 14, 648–658. [https://doi.org/10.5209/rev\\_SJOP.2011.v14.n2.13](https://doi.org/10.5209/rev_SJOP.2011.v14.n2.13).
- García, O. F., Fuentes, M. C., Gracia, E., Serra, E., & Garcia, F. (2020a). Parenting warmth and strictness across three generations: parenting styles and psychosocial adjustment. *International Journal of Environmental Research and Public Health*, 17(20), 7487. <https://doi.org/10.3390/ijerph17207487>.
- García, O. F., Lopez-Fernandez, O., & Serra, E. (2018b). Raising Spanish children with an antisocial tendency: do we know what the optimal parenting style is? *Journal of Interpersonal Violence*. <https://doi.org/10.1177/0886260518818426>.
- García, O. F., Serra, E., Zacaes, J. J., & Garcia, F. (2018c). Parenting styles and short- and long-term socialization outcomes: a study among Spanish adolescents and older adults. *Psychosocial Intervention*, 27(3), 153–161. <https://doi.org/10.5093/pi2018a21>.
- García, O. F., & Serra, E. (2019). Raising children with poor school performance: parenting styles and short- and long-term consequences for adolescent and adult development. *International Journal of Environmental Research and Public Health*, 16(7), 1089. <https://doi.org/10.3390/ijerph16071089>.
- García, O. F., Serra, E., Zacaes, J. J., Calafat, A., & Garcia, F. (2020b). Alcohol use and abuse and motivations for drinking and non-drinking among Spanish adolescents: do we know enough when we know parenting style? *Psychology & Health*, 35(6), 645–654. <https://doi.org/10.1080/08870446.2019.1675660>.
- Gracia, E., Garcia, F., & Lila, M. (2014). Male police officers' law enforcement preferences in cases of intimate partner violence



- versus non-intimate interpersonal violence: do sexist attitudes and empathy matter? *Criminal Justice and Behavior*, 41(10), 1195–1213. <https://doi.org/10.1177/0093854814541655>.
- Grusec, J. E., & Goodnow, J. J. (1994). Impact of parental discipline methods on the child's internalization of values: a reconceptualization of current points-of-view. *Developmental Psychology*, 30, 4–19. <https://doi.org/10.1037/0012-1649.30.1.4>.
- Grusec, J. E., Danyliuk, T., Kil, H., & O'Neill, D. (2017). Perspectives on parent discipline and child outcomes. *International Journal of Behavioral Development*, 41(4), 465–471. <https://doi.org/10.1177/0165025416681538>.
- Holmbeck, G. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65(4), 599–610. <https://doi.org/10.1037//0022-006X.65.4.599>.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>.
- Jiménez, T. I., Musitu, G., & Murgui, S. (2008). Funcionamiento familiar y consumo de sustancias en adolescentes: el rol mediador de la autoestima [Family functioning and substance use in adolescents: the mediator role of self-esteem]. *International Journal of Clinical and Health Psychology*, 8(1), 139–151. <https://doi.org/10.1590/s0036-36342007000100002>.
- Jimenez, T. I., Estevez, E., & Murgui, S. (2014). Community environment and attitude toward authority: relations with quality of family relationships and aggression toward peers in adolescents. *Anales de Psicología*, 30(3), 1086–1095. <https://doi.org/10.6018/analesps.30.3.160041>.
- Kelley, H. H. (1973). The processes of causal attribution. *American Psychologist*, 28(2), 107–128. <https://doi.org/10.1037/h0034225>.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. Guilford Press.
- Kuhlberg, J. A., Pena, J. B., & Zayas, L. H. (2010). Familism, parent-adolescent conflict, self-esteem, internalizing behaviors and suicide attempts among adolescent Latinas. *Child Psychiatry and Human Development*, 41(4), 425–440. <https://doi.org/10.1007/s10578-010-0179-0>.
- Lamborn, S. D., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 62(5), 1049–1065. <https://doi.org/10.1111/j.1467-8624.1991.tb01588.x>.
- Leary, M. R., & Downs, D. L. (1995). Interpersonal functions of the self-esteem motive: the self-esteem system as a sociometer. (123–144). Plenum Press.
- Leary, M., & Macdonald, G. (2003). Individual differences in self-esteem: a review and theoretical integration. In M. R. Leary, & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 401–418). The Guilford Press.
- Lewis, C. C. (1981). The effects of parental firm control: a reinterpretation of findings. *Psychological Bulletin*, 90, 547–563. <https://doi.org/10.1037/0033-2909.90.3.547>.
- Lila, M., Gracia, E., & Garcia, F. (2013). Ambivalent sexism, empathy and law enforcement attitudes towards partner violence against women among male police officers. *Psychology Crime and Law*, 19(10), 907–919. <https://doi.org/10.1080/1068316X.2012.719619>.
- Lopez, E. E., Olaizola, J. H., Ferrer, B. M., & Ochoa, G. M. (2006). Aggressive and nonaggressive rejected students: an analysis of their differences. *Psychology in the Schools*, 43(3), 387–400. <https://doi.org/10.1002/pits.20152>.
- Lord, S. E., Eccles, J. S., & McCarthy, K. A. (1994). Surviving the junior high school transition: family processes and self-perceptions as protective and risk factors. *The Journal of Early Adolescence*, 14(2), 162–199. <https://doi.org/10.1177/027243169401400205>.
- Lorence, B., Hidalgo, V., Pérez-Padilla, J., & Menéndez, S. (2019). The role of parenting styles on behavior problem profiles of adolescents. *International Journal of Environmental Research and Public Health*, 16(15), 2767. <https://doi.org/10.3390/ijerph16152767>.
- Lund, I., & Scheffels, J. (2019). 15-year-old tobacco and alcohol abstainers in a drier generation: characteristics and lifestyle factors in a Norwegian cross-sectional sample. *Scandinavian Journal of Public Health*, 47, 439–495. <https://doi.org/10.1177/1403494818770301>.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: parent-child interaction. In P. H. Mussen (Ed.), *Handbook of child psychology* (pp. 1–101). Wiley.
- Mackinnon, D., & Dwyer, J. (1993). Estimating mediated effects in prevention studies. *Evaluation Review*, 17(2), 144–158. <https://doi.org/10.1177/0193841X9301700202>.
- Markus, H., & Wurf, E. (1987). The dynamic self-concept: a social psychological perspective. *Annual Review of Psychology*, 38, 229–337. <https://doi.org/10.1146/annurev.ps.38.020187.001503>.
- Martínez, I., & Garcia, J. F. (2007). Impact of parenting styles on adolescents' self-esteem and internalization of values in Spain. *Spanish Journal of Psychology*, 10, 338–348. <https://doi.org/10.1017/S1138741600006600>.
- Martínez, I., & Garcia, J. F. (2008). Internalization of values and self-esteem among Brazilian teenagers from authoritative, indulgent, authoritarian, and neglectful homes. *Adolescence*, 43(169), 13–29. <http://www.ncbi.nlm.nih.gov/pubmed/18447078>.
- Martínez, I., Cruise, E., Garcia, O. F., & Murgui, S. (2017). English validation of the Parental Socialization Scale—ESPA29. *Frontiers in Psychology*, 8(865), 1–10. <https://doi.org/10.3389/fpsyg.2017.00865>.
- Martínez, I., Fuentes, M., Garcia, F., & Madrid, I. (2013). The parenting style as protective or risk factor for substance use and other behavior problems among Spanish adolescents. *Adicciones*, 25(3), 235–242. <https://doi.org/10.20882/adicciones.51>.
- Martínez, I., Garcia, J. F., Camino, L., & Camino, C. (2011). Parental socialization: Brazilian adaptation of the ESPA29 scale [Socialização parental: Adaptação ao Brasil da escala ESPA29]. *Psicologia: Reflexão e Crítica*, 21(4), 640–647. <https://doi.org/10.1590/S0102-79722011000400003>.
- Martínez, I., Garcia, F., Musitu, G., & Yubero, S. (2012). Family socialization practices: factor confirmation of the Portuguese version of a scale for their measurement. *Revista de Psicodidáctica*, 17(1), 159–178. <https://doi.org/10.1387/RevPsicodidact.1306>.
- Martínez, I., Garcia, F., Fuentes, M. C., Veiga, F., Garcia, O. F., Rodrigues, Y., Cruise, E., & Serra, E. (2019a). Researching parental socialization styles across three cultural contexts: Scale ESPA29 bi-dimensional validity in Spain, Portugal, and Brazil. *International Journal of Environmental Research and Public Health*, 16(2), 197. <https://doi.org/10.3390/ijerph16020197>.
- Martínez, I., Murgui, S., Garcia, O. F., & Garcia, F. (2019b). Parenting in the digital era: Protective and risk parenting styles for traditional bullying and cyberbullying victimization. *Computers in Human Behavior*, 90, 84–92. <https://doi.org/10.1016/j.chb.2018.08.036>.
- Martinez, I., Garcia, F., Veiga, F., Garcia, O. F., Rodrigues, Y., & Serra, E. (2020). Parenting styles, internalization of values and self-esteem: a cross-cultural study in Spain, Portugal and Brazil. *International Journal of Environmental Research and Public Health*, 17(7), 2370. <https://doi.org/10.3390/ijerph17072370>.
- Martinez-Escudero, J. A., Villarejo, S., Garcia, O. F., & Garcia, F. (2020). Parental socialization and its impact across the lifespan.

- Behavioral Sciences*, 10(6), 101. <https://doi.org/10.3390/bs10060101>.
- Muñiz-Rivas, M., Vera, M., & Povedano-Diaz, A. (2019). Parental style, dating violence and gender. *International Journal of Environmental Research and Public Health*, 16(15), 2722. <https://doi.org/10.3390/ijerph16152722>.
- Murgui, S., García, C., García, A. & García, F. (2012). Self-concept in young dancers and non-practitioners: confirmatory factor analysis of the AF5 scale [Autoconcepto en jóvenes practicantes de danza y no practicantes: Análisis factorial confirmatorio de la escala AF5]. *Revista de Psicología del Deporte*, 21(2), 263–269. <https://archivos.rpd-online.com/article/view/727.html>.
- Musitu, G., & García, F. (2001). *ESPA29: Parental socialization scale in adolescence*. Tea.
- Musitu-Ferrer, D., Esteban Ibáñez, M., León, C., & García, O. F. (2019a). Is school adjustment related to environmental empathy and connectedness to nature? *Psychosocial Intervention*, 28(2), 101–110. <https://doi.org/10.5093/pi2019a8>.
- Musitu-Ferrer, D., León-Moreno, C., Callejas-Jerónimo, E. J., Esteban-Ibáñez, M. & Musitu-Ochoa, G. (2019). Relationships between parental socialization styles, empathy and connectedness with nature: their implications in environmentalism. *International Journal of Environmental Research and Public Health*, 16(2461), 2461. <https://doi.org/10.3390/ijerph16142461>.
- Parra, Á., Sánchez-Queija, I., García-Mendoza, D. M., Coimbra, S., Egídio Oliveira, J., & Díez, M. (2019). Perceived parenting styles and adjustment during emerging adulthood: a cross-national perspective. *International Journal of Environmental Research and Public Health*, 16(15), 2757. <https://doi.org/10.3390/ijerph16152757>.
- Pérez, J. F. G., Navarro, D. F. & Llobell, J. P. (1999). Statistical power of Solomon design. *Psicothema*, 11(2), 431–436. <http://www.psicothema.com/psicothema.asp?ID=220>.
- Perez-Gramaje, A. F., García, O. F., Reyes, M., Serra, E., & García, F. (2020). Parenting styles and aggressive adolescents: Relationships with self-esteem and personal maladjustment. *European Journal of Psychology Applied to Legal Context*, 12(1), 1–10. <https://doi.org/10.5093/ejpalc2020a1>.
- Pinquart, M. (2017). Associations of parenting dimensions and styles with externalizing problems of children and adolescents: an updated meta-analysis. *Developmental Psychology*, 53(5), 873–932. <https://doi.org/10.1037/dev0000295>.
- Portt, E., Person, S., Person, B., Rawana, E., & Brownlee, K. (2020). Empathy and positive aspects of adolescent peer relationships: A scoping review. *Journal of Child and Family Studies*, 29(9), 2416–2433. <https://doi.org/10.1007/s10826-020-01753-x>.
- Queiroz, P., García, O. F., García, F., Zacares, J. J., & Camino, C. (2020). Self and nature: parental socialization, self-esteem, and environmental values in Spanish adolescents. *International Journal of Environmental Research and Public Health*, 17(10), 3732. <https://doi.org/10.3390/ijerph17103732>.
- Ridao, P., López-Verdugo, I., & Reina-Flores, C. (2021). Parental beliefs about childhood and adolescence from a longitudinal perspective. *International Journal of Environmental Research and Public Health*, 18(4), 1760. <https://doi.org/10.3390/ijerph18041760>.
- Riquelme, M., García, O. F., & Serra, E. (2018). Psychosocial maladjustment in adolescence: parental socialization, self-esteem, and substance use. *Anales de Psicología*, 34(3), 536–544. <https://doi.org/10.6018/analesps.34.3.15201>.
- Rodrigues, Y., Veiga, F., Fuentes, M. C., & García, F. (2013). Parenting and adolescents' self-esteem: The Portuguese context. *Revista de Psicodidáctica*, 18(2), 395–416. <https://doi.org/10.1387/RevPsicodidact.6842>.
- Rohner, R. P. (1990). *Handbook for the study of parental acceptance and rejection* (3rd ed.). Rohner Research Publications.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Saiz, J., Alvaro, J. L., & Martínez, I. (2011). Relation between personality traits and personal values in cocaine-dependent patients [Relacion entre rasgos de personalidad y valores personales en pacientes dependientes de la cocaína]. *Adicciones*, 23(2), 125–132. <https://doi.org/10.20882/adicciones.155>.
- Serna, C., & Martínez, I. (2019). Parental involvement as a protective factor in school adjustment among retained and promoted secondary students. *Sustainability*, 11(24), 7080. <https://doi.org/10.3390/su11247080>.
- Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: validation of construct interpretations. *Review of Educational Research*, 46, 407–441. <https://doi.org/10.3102/00346543046003407>.
- Steinberg, L., & Morris, A. (2001). Adolescent development. *Annual Review of Psychology*, 52, 83–110. <https://doi.org/10.1146/annurev.psych.52.1.83>.
- Steinberg, L. (2005). Psychological control: Style or substance? In J. G. Smetana (Ed.), *New directions for child and adolescent development: Changes in parental authority during adolescence* (pp. 71–78). Jossey-Bass. <https://doi.org/10.1002/cd.129>.
- Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., & Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 65(3), 754–770. <https://doi.org/10.1111/j.1467-8624.1994.tb00781.x>.
- Steinmayr, R., Wirthwein, L., Modler, L., & Barry, M. M. (2019). Development of subjective well-being in adolescence. *International Journal of Environmental Research and Public Health*, 16(19), 3690. <https://doi.org/10.3390/ijerph16193690>.
- Tomás, J. M., & Oliver, A. (2004). Confirmatory factor analysis of a Spanish multidimensional scale of self-concept [Análisis psicométrico confirmatorio de una medida multidimensional del autoconcepto en español]. *Revista Interamericana de Psicología*, 38(2), 285–293.
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96(3), 506–520. <https://doi.org/10.1037/0033-295X.96.3.506>.
- Turkel, Y. D. & Tezer, E. (2008). Parenting styles and learned resourcefulness of Turkish adolescents. *Adolescence*, 43(169), 143–152. <https://pubmed.ncbi.nlm.nih.gov/18447086>.
- Valente, J. Y., Cogo-Moreira, H., & Sanchez, Z. M. (2017). Gradient of association between parenting styles and patterns of drug use in adolescence: A latent class analysis. *Drug and Alcohol Dependence*, 180, 272–278. <https://doi.org/10.1016/j.drugalcdep.2017.08.015>.
- van der Wal, R. C., Finkenauer, C., & Visser, M. M. (2019). Reconciling mixed findings on children's adjustment following high-conflict divorce. *Journal of Child and Family Studies*, 28(2), 468–478. <https://doi.org/10.1007/s10826-018-1277-z>.
- Veiga, F. H., García, F., Reeve, J., Wentzel, K., & García, O. F. (2015). When adolescents with high self-concept lose their engagement in school. *Revista de Psicodidáctica*, 20(2), 305–320. <https://doi.org/10.1387/RevPsicodidact.12671>.
- Villalobos, J. A., Cruz, A. V. & Sánchez, P. R. (2004). Parental styles and psychosocial development in High-School students [Estilos parentales y desarrollo psicosocial en estudiantes de Bachillerato]. *Revista Mexicana de Psicología*, 21(2), 119–129. <https://psycnet.apa.org/record/2005-00460-002>.
- Villarejo, S., Martínez-Escudero, J. A., & García, O. F. (2020). Parenting styles and their contribution to children personal and social adjustment. *Ansiedad y Estrés*, 26(1), 1–8. <https://doi.org/10.1016/j.anyes.2019.12.001>.
- Wigfield, A., Eccles, J. S., Mac Iver, D., Reuman, D. A., & Midgley, C. (1991). Transitions during early adolescence: Changes in



- children's domain-specific self-perceptions and general self-esteem across the transition to junior high school. *Developmental Psychology*, 27(4), 552–565. <https://doi.org/10.1037/0012-1649.27.4.552>.
- Wild, L., Flisher, A., Bhana, A., & Lombard, C. (2004). Associations among adolescent risk behaviours and self-esteem in six domains. *Journal of Child Psychology and Psychiatry*, 45(8), 1454–1467. <https://doi.org/10.1111/j.1469-7610.2004.00330.x>.
- Wolfradt, U., Hempel, S., & Miles, J. N. V. (2003). Perceived parenting styles, depersonalisation, anxiety and coping behaviour in adolescents. *Personality and Individual Differences*, 34(3), 521–532. [https://doi.org/10.1016/S0191-8869\(02\)00092-2](https://doi.org/10.1016/S0191-8869(02)00092-2).