



Parenting Styles and Youth's Externalizing and Internalizing Behaviors: Does Self-Control Matter?

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Abstract

The externalizing and internalizing behaviors of children and youth have been the object of extensive criminological research, mainly due to the potentially harmful impact on these individuals' future development and adjustment. The current study aimed to explore the influence of parenting styles on the emergence of children and youth's externalizing and internalizing behaviors and to understand the influence of self-control in this relationship. Following a quantitative self-report approach and using a sample of 472 Portuguese middle-school children, this study found that the children's sex, low self-control, and authoritative parenting style significantly predicted externalizing and internalizing behaviors. The data also revealed that children's age and the permissive parenting style significantly predicted externalizing but not internalizing behaviors and that the authoritarian parenting style significantly predicted internalizing behaviors. Low self-control partially mediated the relationship between parenting styles and externalizing and internalizing behaviors in most tested models. Implications for theory and practice are discussed.

Keywords Externalizing behaviors · Internalizing behaviors · Parenting styles · Self-control · Indirect effects

Introduction

Over the last decades, there has been a growing interest in the study of children and youth's problem behavior, mainly due to its relation to difficulties in later behavioral, emotional, cognitive, and social adjustment (Calkins et al., 2007; Campbell et al., 2000; Keane & Calkins, 2004; Lier et al., 2012; Liu et al., 2011; Min et al., 2018; Rinaldi & Howe, 2012; Sommer, 2010).

A common approach is the one that classifies children and youth's problem behaviors into two major categories, namely externalizing and internalizing behaviors (Akhter et al., 2011; Alizadeh et al., 2011; Rinaldi & Howe, 2012), acknowledging that adolescence is one of the most critical developmental periods for the emergence and development of such behaviors (Braza et al., 2015; Lorber & Egeland, 2009; Risper, 2012).

Externalizing behaviors are complex and can cause severe consequences for the child and the community as whole in the immediate or long term (Georgiou & Symeou, 2018). Largely, these behaviors involve actions and include disruptive (*e.g.*, hyperactivity, anger, frustration, attention problems, impulsivity), antisocial, aggressive, and/or delinquent behaviors (Alizadeh et al., 2011; Braza et al., 2015; Rose et al., 2018), being, therefore, characterized by their visibility and exteriority (Georgiou & Symeou, 2018; Liu, 2004; Rinaldi & Howe, 2012; Sommer, 2010). In other words, externalizing behaviors constitute an evident type of behavior, based on which the child interacts negatively with the environment that surrounds him and adopts inadequate behaviors, such as defiance, verbal aggression, restlessness (Rinaldi & Howe, 2012), destruction of property, among others (Keil & Price, 2006).

On the other hand, internalizing behaviors are intrapersonal, that is, turned inside out (Achenbach & Edelbrock, 1978) and expressed at the child's psychological and emotional levels. Internalizing behaviors include anxiety (*e.g.*, worry, fear), distress (*e.g.*, difficulty being calm), shyness and/or social isolation, withdrawal, depression, and somatization, among others (Alizadeh et al., 2011; Braza et al., 2015; Georgiou & Symeou, 2018; Liu, 2004; Rinaldi &

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Howe, 2012). These behavioral problems have a more pronounced and negative impact on the child's psychological functioning than on their exterior environment since, in most situations, the behavior is covert and difficult to detect (Georgiou & Symeou, 2018; Rose et al., 2018).

When comparing the expression of such behaviors as a function of the child's sex, previous studies have been consistently demonstrating that girls tend to express more internalizing behaviors, such as anxiety and depression, while boys tend to adopt more externalizing behaviors, such as anger and aggressive behavior (Bongers et al., 2003; Campos et al., 2014; Chaplin & Aldao, 2013; Crijnen et al., 1997; Moral et al., 2012).

The importance of studying these behaviors is related to the fact that they are usually associated with several negative outcomes over the life course. For example, previous studies have revealed that externalizing behaviors increase the risk of juvenile delinquency, adult crime, violent and antisocial behaviors, and substance abuse. Also, internalizing behaviors appear to be associated with a greater risk of depression, anxiety, suicide in adolescence and adulthood, and school failure (Farrington, 2003; Liu, 2004; Lorber & Egeland, 2009; Min et al., 2014; Moffitt, 1993). As such, the importance of understanding the origin of these behaviors (Georgiou & Symeou, 2018) and their developmental patterns is acknowledged, reinforcing the need to adopt intervention strategies suitable for preventing those behaviors and their iatrogenic effects (Liu, 2004).

Prior research has focused on the influence that individual, familiar, or contextual factors play in the emergence and development of such behaviors (Min et al., 2018). Particularly, focusing on the individual and family levels, previous studies have consistently shown that parenting styles and self-control might play a central role in the emergence and development of children and youth's disruptive behaviors, such as externalizing, internalizing and even delinquent behaviors (Georgiou & Symeou, 2018; Farrington, 2003; Hovee et al., 2009; Lorber & Egeland, 2009; Liu, 2004; Min et al., 2014; Moffitt, 1993; Steinberg et al., 2006; Cauffman et al., 2005; Moffitt et al., 2011; Pratt & Cullen, 2000).

Thus, the current study seeks to explore the influence that permissive, authoritarian, and authoritative parenting styles have on the development of externalizing and internalizing behaviors, as well as to understand the potential indirect effects that self-control can have on this relationship, using a sample of 472 Portuguese middle school children and youth.

Parenting Styles

Parenting is a complex task, particularly when considering the different elements, processes, and dynamics it comprises (Rose et al., 2018). Over the years, there has been extensive theoretical and empirical research into the influence of

parenting on children's socialization (Baumrind, 1967, 1971, 1978), which has commonly followed two distinct theoretical approaches (Darling & Steinberg, 1993): either dimensional or typological. The former focuses on the individual dimensions of parenting, i.e., parenting practices (e.g., affection, monitoring, and parental discipline). The latter labels parents with a particular parenting style according to different dimensions (Baumrind, 1967; Pinquart, 2017). There are a series of reasons based upon which the typological approach has been considered preferable for a comprehensive understanding of the influence parenting exert on children and youth behavior. First, it provides a holistic, interactive, and dynamic understanding of the processes and environments on which the family context is based (O'Connor, 2002). Furthermore, it possesses an "*increased ecological validity*" (Pereira et al., 2009, p. 455) to the extent that it can capture the interaction effects of the different dimensions and how they affect and influence each other (Steward & Bond, 2002). Finally, this approach captures more comprehensively the multiple aspects underlying a child's upbringing and, as such, provides a broader understanding of the role that behaviors, interactions, and emotions play in shaping children and youth's behavior (Hoeve et al., 2011).

Baumrind (1967) proposes a typological approach based on two dimensions: parental control/demand and parental warmth/involvement and responsiveness. The first concerns the "*active role that parents play in promoting respect for rules and social conventions*" (Akhter et al., 2011, p.24) and is related to high expectations, the definition of behavioral limits, and the application of rules and standards of conduct, including monitoring child's behavior. The second is focused on responding to the child's needs, being available to talk, and providing a safe environment for learning and integral development. According to Baumrind (1967), combining the above-mentioned dimensions allows the conception of three distinct parenting styles: authoritative, authoritarian, and permissive (Baumrind, 1967).

The authoritative parenting style is rational and issue-oriented and is characterized by a parental attitude particularly oriented toward the child's activities and behaviors. Usually, parents adopting such a style are highly responsive, affectionate, and cognitive, establishing and encouraging flexible networks and communication with their children. Authoritative parents tend to exert firm control and set clear limits and boundaries in the face of disagreements between themselves and their children, motivating obedience but not limiting them incessantly (Baumrind, 1978). Empirical evidence has shown that children exposed to this parenting style present lower levels of externalizing and internalizing behaviors (Akhter et al., 2011; Alizadeh et al., 2011; Pinquart, 2017; Rose et al., 2018), mainly because these are parents who are warm, providing the child with structured environments,

but who are also capable of adapting this environment to the child's needs. This parenting style is perceived as the most suitable for promoting the child's behavioral and psychological development and adjustment (Rose et al., 2018).

On the other hand, authoritarian and permissive parenting styles have been systematically associated with increased rates of externalizing and internalizing behaviors (e.g., Baumrind et al., 2010; Pinquart, 2017; Rinaldi & Howe, 2012). The authoritarian parenting style embodies parental efforts to shape, control, and evaluate the child's conduct according to pre-established behavioral standards. These standards are usually absolute, theologically motivated, and directed by a figure of authority and superiority. This limits the child's individuality since punitive measures and strict rules are used when the child adopts any behavior that goes against what the parents think is the appropriate way to behave. Authoritarian parents do not encourage dialog or the debate of ideas, believing that the child must comply with what the parental figure imposes (Baumrind, 1978), thus contributing to the development of children's negativity and tension in terms of family dynamics and communications, which, in turn, has been associated with children's lower levels of attachment to their parents and higher rates of disruptive behavior, such as externalizing or internalizing (Amran & Basri, 2020).

A permissive parenting style refers to parents who do not set standards, limits, and behavioral expectations for their children despite being warm and affectionate with them. Permissive parents tend to be unable to enforce consistent discipline thus leaving the children free to satisfy their impulses, actions, and desires (Baumrind, 1978), which, in turn, has been associated with higher rates of children's externalizing and internalizing behaviors.

Considering this, it is relatively easy to assume that the relationship between parenting styles and children's externalizing and internalizing behaviors is robust and well-documented. Furthermore, previous studies have demonstrated that these relationships are sustained regardless of the child sex (Akhter et al., 2011; Alizadeh et al., 2011; Braza et al., 2015; Pinquart, 2017; Rinaldi & Howe, 2012).

However, less is known about the processes, mechanisms, or variables underlying such a relationship. This reinforced the need to research further the influence that other factors might exert at individual, familial, or contextual levels. In this regard, research has been conducted to understand self-control's role in this relationship. These studies have revealed that self-control plays an important role in the relationship between parenting styles and children's externalizing and internalizing behaviors, as it is explored below (Bai et al., 2020; Finkenauer et al., 2005; Özdemir et al., 2013; Pan et al., 2021; Tehrani & Yamini, 2020; Van Prooijen et al., 2018; Zhang & Wang, 2022).

Self-Control

Self-control is a widely used and researched construct, and a considerable number of definitions can be found throughout the literature (e.g., Finkenauer et al., 2005; Gottfredson & Hirschi, 1990; Moffitt et al., 2011; Pan et al., 2021; Tangney et al., 2004). For example, Moffitt et al., (2011, p. 2693) see self-control as an "umbrella construct" encompassing concepts and measures from different areas such as impulsivity, delay of gratification, inattention, conscientiousness, and timeless choice. On the other hand, at the heart of the concept of self-control proposed by Tangney et al. (2004) is the ability to override or modify internal responses, suspend undesirable tendencies (e.g., impulses), and refrain from acting on them.

The current study follows Gottfredson and Hirschi's (1990) conceptualization, according to which self-control constitutes an individual factor that takes the form of "*the tendency to avoid acts whose long-term costs exceed their momentary advantages*" (Hirschi & Gottfredson, 1994, p. 3). According to the authors, there are six core elements of low self-control: (i) impulsiveness and the inability to delay gratification, i.e., an attitude and behavior focused on the immediate and the present; (ii) lack of persistence or tenacity, which means that individuals with low self-control have a tendency to avoid complex tasks, little enthusiasm for work or persistence to finish a task already started; (iii) participation in risk-seeking activities, i.e., involvement in risky, exciting, and arousing activities; (iv) a low appreciation of intellectual ability, in other words, a person that lacks self-control prefers to engage in physical and risky activities rather than cognitive and mental ones; (v) egocentrism, i.e., being unable to take into account the perspective of others or caring to their needs; and (vi) volatile temperament, which means minimal tolerance for frustration and little ability to respond to conflicts using verbal rather than physical means (Gottfredson & Hirschi, 1990).

Previous studies have also explored whether self-control manifests itself differently as a function of sex. In their *General Theory of Crime*, Gottfredson and Hirschi (1990) refer that women develop higher levels of self-control, which is corroborated by Duckworth et al. (2015). Furthermore, previous studies have demonstrated that the influence of low self-control on behavior occurs in the same way, regardless of sex (Botchkovar et al., 2015; Ivert et al., 2018). However, several other studies showed that the influence of self-control on behavior varies depending on the sex of the individuals (Chui & Chan, 2016; De Ridder et al., 2012; Flexon et al., 2016), reinforcing the need for further research (Pechorro et al., 2021).

Empirical evidence has shown a robust association between deviance, crime, and self-control, and criminologists have focused on exploring the factors responsible for

the differences in the levels of self-control, particularly those most commonly associated with low self-control (Beaver et al., 2010). A fundamental theoretical assumption from the *General Theory of Crime* (Gottfredson & Hirschi, 1990) concerns the fact that it proposes that self-control develops during the first years of a child's life and becomes stable around ten years of age, even though this stability is not absolute, but rather between individuals (Vazsonyi & Jiskrova, 2018). In this sense, Gottfredson and Hirschi (1990) attribute the greatest weight to parenting in developing self-control. Parents are usually responsible for monitoring and supervising their children's behavior, recognizing inappropriate behavior, and punishing it when it occurs, thus instilling the development of self-control. Based on these theoretical premises, several empirical studies have tested this hypothesis and verified that parenting is important in developing children's self-control (e.g., Marcone et al., 2020; Özdemir et al., 2013; Tehrani & Yamini, 2020). Overall, these studies highlighted family stability, positive parenting, good parent-child relationships, monitoring, affection, emotional support, consistent discipline, and an authoritative parenting style as the most important aspects of parenting for developing self-control. Particularly, it was found that ineffective parenting practices in which authoritarian and/or permissive parenting styles prevail, combined with poor family stability, negative parenting, and poor relations and interactions between parents and children, are associated with lower levels of self-control in children (Marcone et al., 2020; Tehrani & Yamini, 2020).

Indirect Effects Between Parenting Styles, Externalizing and Internalizing Behaviors, and Self-Control

Over the years, several studies and theoretical assumptions have highlighted the importance of self-control as a mediator of the relationship between parenting and children's externalizing, internalizing, antisocial, or even delinquent behaviors. For example, Tehrani and Yamini's (2020) meta-analysis explored the relationship between effective parenting practices, low self-control, and antisocial behavior. The results showed that parenting practices indirectly affected antisocial behavior through low self-control and directly affected antisocial behavior regardless of low self-control, thus suggesting the mediation effect of self-control on the relationship between parenting practices and children's antisocial behavior (Tehrani & Yamini, 2020). Van Prooijen et al. (2018) found no interaction effects between self-control and concerning externalizing and internalizing problems. Nevertheless, it was found that higher levels of children's self-control, reported by both the mother and the father, were associated with lower levels of externalizing behaviors. In comparison, higher levels of self-control

reported by the mother were also associated with fewer internalizing behaviors. Overall, positive parenting practices by both parents were associated with fewer externalizing and internalizing behaviors.

In their study, Özdemir et al. (2013) explored the direct and indirect relationships between parenting practices, such as closeness, monitoring and affection, low self-control, and aggression. The results revealed that parental measures of closeness and monitoring were significantly and negatively correlated with low self-control and aggressive behavior. In addition, the authors analyzed the role of self-control in this relationship. They concluded that parental measures were directly correlated with aggressive behavior and indirectly through low self-control. Specifically, monitoring by parents had significant direct and indirect effects on aggression through low self-control, suggesting that adolescents whose parents monitored their behaviors were more likely to develop greater self-control, which, in turn, led to the adoption of fewer aggressive behaviors.

Rezaei et al. (2019) sought to explore the relationship between parenting styles and the capacity for self-control in delinquent adolescents. The results showed that juvenile delinquents with a higher perception of authoritative parenting style and a lower perception of permissive parenting style had higher levels of self-control. Regression analyses show that an increase in the perception of authoritative parenting style and a decrease in the perception of authoritarian parenting style was associated with higher levels of self-control, thus suggesting that parenting styles "*can predict self-control capacity of juvenile delinquents*" (p. 61). Specifically, authoritative parenting creates favorable socialization conditions for developing self-control, while authoritarian parenting reduces juvenile delinquents' ability to exercise self-control (Rezaei et al., 2019).

Similarly, Finkenauer et al. (2005) showed that both self-control and some parenting features, such as psychological control, poor parental monitoring and supervision, were independently associated with higher rates of emotional problems (e.g., depression, stress, and low self-esteem) and behavioral problems (e.g., aggression) in adolescents between 10 and 14 years. Also, low levels of self-control reported by the youth were strongly associated with behavioral and emotional problems, regardless of gender. Additionally, perceiving parents as restrictive and psychologically controlling was associated with higher emotional and behavioral problems. On the other hand, perceived parental receptivity, solidarity, and proper monitoring of adolescents' activities and whereabouts were associated with youth's lower emotional and behavioral problems. The results also indicated that the link between parenting and behavioral and emotional problems was partially mediated by self-control.

Recently, using a sample of 611 Chinese adolescents, Zhang and Wang (2022) examined the mediating role of

self-control in the relationship between parenting styles, namely paternal and maternal rejection, affection and overprotection, and externalizing and internalizing behaviors. In addition, they also sought to explore if there were gender differences in the abovementioned relationships. The results showed that parenting variables had different influences on adolescent behavior. Specifically, paternal rejection was positively associated with externalizing behaviors, while maternal rejection was positively correlated with internalizing behaviors. Paternal affection, not maternal affection, was negatively correlated with internalizing behaviors. Maternal overprotection was positively associated with externalizing and internalizing behaviors. Adolescents' self-control was significantly and negatively correlated with externalizing and internalizing behaviors. Also, adolescents' self-control significantly mediated the effect of maternal rejection on internalizing behaviors and paternal rejection on externalizing behaviors (Zhang & Wang, 2022).

The above-mentioned studies have shown that positive parenting, such as the authoritative parenting style, contributes to lower levels of externalizing and internalizing behaviors through its influence on reducing low self-control. In turn, children exposed to negative parenting, such as authoritarian and permissive parenting styles, have more externalizing and internalizing behaviors due to the influence of these parenting styles on higher levels of low self-control (Liu et al., 2019; Pan et al., 2021; Tehrani & Yamini, 2020; Van Prooijen et al., 2018; Zhang & Wang, 2022).

Given the empirical evidence described above, it should be noted that externalizing and internalizing behaviors have a central influence on the development of children and youth and that parenting styles and self-control play an important role in developing these behaviors. Despite this, the development of this study is essential since, to the best of our knowledge, no other study has yet explored the relationship between parenting styles and externalizing and internalizing behaviors, neither in the Portuguese context nor with this specific population. In addition, few studies have allowed us to understand the role of self-control in this relationship. Those carried out have shown mixed results, thus reinforcing the need for further research to understand how the parenting styles developed by Baumrind (1971, 1978) influence the externalizing and internalizing behaviors of children and youth, as well as the role of self-control in this relationship.

Current Study

Given the theoretical and empirical considerations presented, this exploratory cross-sectional study sought to explore and compare the relative influence of the parenting styles proposed by Baumrind (1971, 1978) on the emergence and development of children and youth's externalizing and internalizing behaviors. Furthermore, it aimed to analyze

self-control's potential mediating role in this relationship. Following this goal and considering the theoretical rationale underlying this subject, the following hypotheses were tested: (i) authoritarian and permissive parenting styles positively influence children and youth's externalizing and internalizing behaviors; (ii) authoritative parenting style negatively influences children and youth's externalizing and internalizing behaviors; (iii) as age increases, the levels of externalizing and internalizing behaviors increase; (iv) female children report higher levels of internalizing behaviors while male children report higher levels externalizing behaviors; (v) children and youth's low self-control is positively associated with externalizing and internalizing behaviors; (vi) children and youth's low self-control has a mediating effect on the relationship between parenting styles and externalizing and internalizing behaviors, that is, each of the parenting styles influences externalizing and internalizing behaviors, through their influence on increasing and/or decreasing low self-control.

Method

Participants

The study was conducted with a non-clinical convenience sample. The participants ($n=472$) were children and youth between 12 and 15 years old, attending the 7th ($n=161$), 8th ($n=144$), and 9th ($n=167$) grades of middle school. The sample consisted of 57% males ($n=268$), with an average age of 13.30 ($SD=0.983$).

Procedures

The data were collected during 2022. The participating schools were selected based on the school years administrated and their availability and willingness to participate in the study. To ensure the school's participation, the researchers contacted each principal to obtain consent for the research development. From the twelve schools in the district of Porto that were invited to participate in the study, only four agreed to participate (the remaining eight either formally declined to participate or did not provide any kind of response). The schools that agreed to collaborate in the study were then contacted for the joint selection of the specific classes that would be sampled, considering the eligibility criteria defined, namely the participant's age and grade. Students with special educational needs were not considered eligible for participation in the research. This contact also allowed the outline of the procedures needed to contact the parents/legal guardians to obtain their informed consent and authorization for their children's participation in the research, considering all participants were under-aged.

Furthermore, the consent of the participating children and youth was also requested before the data collection. Finally, it should also be mentioned that before the data collection procedure, the research project was submitted to the Faculty of Law of the University of Porto's Ethics Committee, which approved the current study's execution. All participants completed a paper and pencil self-report measure after the researchers explained and provided the necessary study details and instructions on completing the forms.

Measures

Parenting Styles

Parenting styles (permissive, authoritarian, and authoritative) were assessed using the Parental Authority Questionnaire (PAQ; Buri, 1991, adapted for the Portuguese population by Morgado et al., 2006), which is a self-report measure directed at children and youth. This measure comprises 30 items that reflect parents' educational strategies and perspectives during their children's childhood and adolescence. Children and youth are asked to express the degree of agreement with each one of the statements presented using a five-point Likert scale, ranging from (1) "totally disagree" to (5) "totally agree." The items are grouped into three subscales of 10, each corresponding to the specific parenting style under study. Each subscale is scored between 10 and 50 points. The subscale with the highest score represents the parenting style predominantly adopted by the parent (Buri, 1991; Morgado et al., 2006). Concerning reliability, the PAQ consistency analyses conducted in this study revealed an adequate internal consistency (permissive parenting style $\alpha=0.64$; authoritarian parenting style $\alpha=.82$; authoritative parenting style $\alpha=0.83$).

Externalizing and Internalizing Behaviors

Externalizing and internalizing behaviors were measured using the Youth Self Report (YSR/11–18; adapted and validated for the Portuguese population by Fonseca & Monteiro, 1999). Being part of the Achenbach System of Empirically Based Assessment (Achenbach & Rescorla, 2001), YSR is a high-quality diagnostic self-report measure for emotional and behavioral problems and social skills of children and adolescents, whose standard classification period is the last six months (Achenbach & Rescorla, 2001). The internalizing syndrome scale, which measures emotional problems, comprises three subscales: anxious/depressed, withdrawn/depressed, and somatic complaints. The externalizing syndrome scale assesses behavioral problems and comprises the subscales of rule-breaking behavior and aggressive behavior. For each item presented, respondents are requested to indicate the frequency of each behavior on a scale ranging from

(0) "not true," (1) "somewhat or sometimes true," and (2) "very true or often true" (Achenbach & Rescorla, 2001). In the current study, the YSR showed satisfactory internal consistency indexes, specifically $\alpha=0.67$ for the externalizing and $\alpha=0.72$ for the internalizing syndrome scales.

Self-control

Self-control was assessed using the Low Self-Control Scale (LSCS) by Grasmick et al. (1993). The original Grasmick LSCS is an attitudinal and self-report measure comprising 24 items, corresponding to the six dimensions of self-control proposed in Gottfredson and Hirschi's (1990) *General Theory of Crime*, namely impulsivity, preference for simple tasks, risk-seeking, preference for physical activities, being self-centered, and having trouble controlling one's temper. The children and youth were asked to rate their degree of agreement for each of the items, using a 4-point Likert scale, ranging from (1) "totally disagree" to (4) "totally agree." The items are aggregated to form a total score; the higher this score, the lower the levels of self-control. In the current study, good levels of internal consistency were found for the total scale ($\alpha=0.82$).

Data Analysis

Descriptive statistics and reliability analyses of the scales were used to assess the psychometric features of the sample. Independent samples *t*-tests and Cohen's *d* (effect size measure) were used to explore gender differences. Pearson's *r* correlations coefficients were used to analyze the relationships between the variables under study. Additional data analysis procedures explored the direct and indirect effects of parenting styles, externalizing and internalizing behaviors, and self-control. Multiple linear regression analysis was conducted to identify significant predictors of children and youth's externalizing and internalizing behaviors. The Ordinary Least Squares method was used to obtain the Beta values (β) and the adjusted r^2 . In addition, to assess the quality of the model's fit, the Coefficient of Determination (R^2) and the *F*-test were calculated to check the overall significance of the regression. In turn, the assumptions of the linear regression were validated using the Durbin-Watson Test for the Independence of Random Terms (ui). Finally, the Variance Inflation Factor (VIF) was used to check for multicollinearity. Values greater than 5 would indicate multicollinearity (Field, 2013). In addition, SPSS PROCESS MACRO 4.3 was used to examine the indirect effects between the variables under study (Hayes, 2012). Briefly, this tool allows us to (1) estimate the total effect of the Independent Variable (IV) on the Dependent Variable (DV); (2) to understand the effect of the IV on the DV by controlling for the Mediating Variable (MV); and (3) to analyze the indirect effect of the

IV on the DV through the MV. In addition, PROCESS also makes it possible to test mediation and moderation models by estimating the coefficients of linear or logistic regressions, regardless of the nature of the variables under analysis, calculating the direct and indirect effects in mediation and moderation models (Hayes, 2012).

Results

Sample Descriptive Statistics for Externalizing and Internalizing Behaviors, Parenting Styles and Self-Control, Both for the Total Sample and by Gender

Table 1 presents the descriptive statistics of the main study variables: externalizing and internalizing behaviors, parenting styles and low self-control, for the total sample and for females and males, separately. Girls presented significantly higher mean scores for internalizing behaviors ($M = 22.64$; $SD = 11.04$) than boys ($M = 13.26$; $SD = 8.86$). Concerning parenting styles, the results revealed that the authoritative parenting style is the most prevalent in the sample ($M = 37.39$; $SD = 6.51$). Furthermore, although higher mean levels for all parenting styles were observed for boys, compared with girls, significant differences were only found for

the authoritarian parenting style ($p < 0.00$; $d = 0.33$). Lastly, regarding self-control, the majority of participants presented moderate to high levels of low self-control ($M = 55.43$; $SD = 9.63$; Gottfredson & Hirschi, 1990). No significant differences were found between boys and girls.

Correlations Between Externalizing Behaviors, Internalizing Behaviors, Parenting Styles and Self-Control

Table 2 reports the Pearson’s correlations between studied variables. The results revealed that externalizing and internalizing behaviors are significantly correlated ($r = 0.504^{**}$), indicating that higher levels of externalizing behaviors are associated with higher levels of internalizing behaviors. Furthermore, authoritarian parenting style is positively correlated with externalizing behaviors ($r = 0.246^{**}$) and internalizing behaviors ($r = 0.182^{**}$), suggesting that the higher the frequency of authoritarian parenting style perceived by the children, the higher the rates of externalizing and internalizing behaviors. In line with this, the authoritative parenting style is negatively correlated with externalizing behaviors ($r = -0.410^*$) and internalizing behaviors ($r = -0.379^{**}$), demonstrating that the more prevalent this parenting style is, the lower the rates of children and youth’s externalizing and internalizing behaviors. Regarding

Table 1 Descriptive statistics: Cronbach’s α , mean, standard deviation, minimum and maximum values, Cohen’s d , of the variables under study for the total sample and according to the sex of the children

Variable	Total sample			Male		Female		d	p
	α	n	$M \pm SD (Min-Max)$	N	$M \pm SD (Min-Max)$	n	$M \pm SD (Min-Max)$		
Externalizing	.67	450	10.10 \pm 6.99 (0–47)	191	9.59 \pm 6.75 (0–34)	251	10.36 \pm 6.76(0–43)	-.11	.24
Internalizing	.72	448	18.75 \pm 11.26 (0–50)	185	13.23 \pm 8.86 (0–50)	255	22.64 \pm 11.04 (2–50)	-.92	<.001
Parenting styles									
Permissive	.64	458	26.11 \pm 5.1 (10–42)	193	26.60 \pm 5.53 (10–42)	257	25.72 \pm 4.77 (11–41)	.17	.07
Authoritarian	.82	462	32 \pm 6.8 (14–49)	198	33.20 \pm 6.13 (15–46)	257	31 \pm 7.12 (14–49)	.33	<.001
Authoritative	.83	459	37.39 \pm 6.51 (14–50)	193	37.86 \pm 5.47 (23–49)	258	37.06 \pm 7.15 (14–50)	.12	.19
Low self-control	.82	433	55.43 \pm 9.63 (25–92)	180	56.47 \pm 9.73 (25–92)	245	54.68 \pm 9.36 (31–88)	.19	.06

α alpha Cronbach’s, M Mean, SD Standard Deviation

Table 2 Correlations between the variables under study

	1	2	3	4	5	6
(1) Externalizing	1	.504***	-.088	.246**	-.410**	.518**
(2) Internalizing		1	-.063	.182**	-.379**	.241**
(3) Permissive parenting style			1	-.218**	-.169**	.127**
(4) Authoritarian parenting style				1	-.318**	.264**
(5) Authoritative parenting style					1	-.281**
(6) Low self-control						1

** $p < .01$

* $p < .05$

self-control, it is important to note it is positively associated with externalizing behaviors ($r=0.518^{**}$) and internalizing behaviors ($r=0.241^{**}$). Finally, it should also be mentioned that low self-control is positively correlated with permissive ($r=0.127^{**}$) and authoritarian ($r=0.264^{**}$) parenting styles, as well as negatively correlated with authoritative parenting style ($r=-0.281^{**}$), thus suggesting that children exposed to an authoritarian and permissive parenting style have higher levels of low self-control, and that children exposed to an authoritative parenting style have lower levels of low self-control.

Regression Models for Internalizing and Externalizing Behaviors

Table 3 presents the final regression models developed for children and youth's externalizing and internalizing behaviors. As displayed in the table, the regression model for the externalizing behaviors is significant, explaining around 37% ($p<0.001$) of the total variance of the dependent variable. The children's sex ($\beta=0.084$; $p=0.041$), age ($\beta=0.093$; $p=0.021$), and low self-control ($\beta=0.461$; $p<0.001$) significantly predicted externalizing behaviors, suggesting that girls are less likely to adopt externalizing behaviors; that as age increases, so do the levels of externalizing behaviors; and those higher levels of low self-control contribute to explaining higher levels of externalizing behavior. In turn, the permissive ($\beta=-0.097$; $p=0.023$) and authoritative parenting styles ($\beta=-0.242$; $p<0.001$) significantly integrate the model but in a negative manner, thus suggesting that greater exposure to each one of these parenting styles leads to lower levels of children and youth's externalizing behaviors.

As for internalizing behaviors, the regression model executed is statistically significant and explains around 35%

($p<0.001$) of the total variability of the dependent variable. Considering the predictors introduced in the model, the results revealed that the children's sex ($\beta=0.438$; $p<0.001$), authoritarian parenting style ($\beta=0.130$; $p<0.005$), and low self-control ($\beta=0.179$; $p<0.001$) integrate the model in a positive and statistically significant way, thus indicating that female children are more likely to present higher levels of internalizing behaviors; that the more the children are exposed to an authoritarian parenting style, the higher the rates of internalizing behaviors; and that, similarly to what was found for externalizing behaviors, higher levels of low self-control predicted more internalizing behaviors. In turn, the authoritative parenting style is the only statistically significant variable ($\beta=-0.266$; $p<0.001$), which suggests that the more children are exposed to this parenting style, the lower the levels of internalizing behaviors.

Indirect Effects of Low Self-Control

Mediation models were tested to explore the indirect effects of low self-control in the relationship between parenting styles and externalizing and internalizing behaviors. Three models were generated to analyze the mediation processes associated with predicting externalizing behaviors, as presented in Table 4.

Figure 1 illustrates the first model that tested the mediation effect of low self-control on the relationship between permissive parenting style and externalizing behaviors. The results show that the independent variable, permissive parenting style, has a positive and statistically significant effect on the mediating variable low self-control (direct effect= 0.215 ; $p=0.025$) and that the mediating variable has a positive and statistically significant effect on the dependent variable, externalizing behaviors (direct effect= 0.390 ; $p<0.000$).

Table 3 Multiple linear regression models for externalizing and internalizing behaviors

Dependent variable: externalizing behaviors						Dependent variable: internalizing behaviors					
Predictors	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	Predictors	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Sex	1.149	.560	.084	2.050	.041	Sex	9.931	.947	.438	10.487	<.001
Age	.641	.277	.093	2.316	.021	Age	.396	.468	.035	.847	.398
Perm	-.129	.056	-.097	-2.284	.023	Perm	.049	.095	.023	.519	.604
Authan	.044	.045	.044	.982	.327	Authan	.215	.076	.130	2.848	.005
Authtive	-.253	.046	-.242	-5.494	<.001	Authtive	-.462	.078	-.266	-5.934	<.001
LSC	.327	.031	.461	10.569	<.001	LSC	.200	.052	.179	3.832	<.001
Constant	-7.031	5.228	-	-1.345	.179	Constant	-4.174	8.836	-	-.472	.637
<i>R</i>	.608						.589				
<i>R</i> ²	.369						.347				
<i>P</i>	<.001						<.001				

b beta, *SE B* standard error, β standardized beta, *T* *t*-test, *p* *p*-value, *R*² coefficient of determination, *Perm* permissive parenting style, *Authan* authoritarian parenting style, *Authtive* authoritative parenting style, *LSC* low self-control

Table 4 Direct effects of X (independent variable) on M (mediating variable) and on Y (dependent variable), direct effects of M on Y and indirect effects of X on Y for each model using Low Self-Control as a mediator (M) and each of the Parenting Styles as predictors (X) of Externalizing Behaviors (Y)

	<i>b</i>	<i>SE</i>	95% <i>CI</i>	<i>T</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Permissive parenting style (X)						.114	.013	.025
Direct effects of X on M	.215	.095	.028/.402	2.255	.025			
Direct effects of M on Y	.390	.032	.327/.453	12.220	.000	.536	.287	.000
Direct effects of X on Y	-.218	.060	-.336/-.010	-3.628	.000			
Indirect effects of X on Y	.084	.047	-.010/.177	-	-			
Authoritarian parenting style (X)						.260	.068	.000
Direct effects of X on M	.363	.068	.228/.497	5.307	.000			
Direct effects of M on Y	.348	.032	.284/.411	10.738	.000	.529	.279	.000
Direct effects of X on Y	.133	.045	.044/.221	2.930	.004			
Indirect effects of X on Y	.126	.029	.075/.187	-	-			
Authoritative parenting style (X)						.296	.088	.000
Direct effects of X on M	-.429	.070	-.567/-.291	-6.117	.000			
Direct effects of M on Y	.317	.031	.255/.318	10.099	.000	.586	.344	.000
Direct effects of X on Y	-.303	.046	-.392/-.213	-6.655	.000			
Indirect effects of X on Y	-.136	.033	-.206/-.077	-	-			

b beta, *SE* *B* standard error, *CI* confidence interval, *T* *t*-test, *p* *p*-value, *R*² coefficient of determination

In turn, the permissive parenting style negatively and significantly predicted externalizing behaviors (direct effect = -0.218; $p = 0.000$). However, as far as indirect effects are concerned, these were tested using bootstrapping procedures, which showed that the standardized effect was 0.047 with a 95% confidence interval ranging from -0.010 to 0.177, including a value of 0. This indicates that although a permissive parenting style has a negative and significant direct effect on externalizing behaviors, the indirect effect through low self-control is insignificant.

The second model, shown in Fig. 1, tested the mediating effect of low self-control on the relationship between authoritarian parenting style and externalizing behaviors to analyze whether authoritarian parenting style increases levels of low self-control, and these, in turn, lead to higher rates of externalizing behaviors. As can be seen, the independent variable authoritarian parenting style has a positive and statistically significant effect on the mediating variable low self-control (direct effect = 0.363; $p = 0.000$), and the mediating variable also has a positive and significant effect on the dependent variable (direct effect = 0.348; $p = 0.000$). As for the independent variable, it has a positive and statistically significant effect on the dependent variable (direct effect = 0.133; $p = 0.004$). However, there was a standardized indirect effect of 0.029 with a 95% confidence interval ranging from 0.075 to 0.187, indicating that the indirect effect was statistically significant. This indicates a partial mediation relationship between the variables because, despite the direct and significant effect between the independent and dependent variables, the authoritarian parenting style indirectly influences increasing levels of externalizing behavior through its positive influence on low self-control.

As for model 3, the aim was to understand the mediating effect of low self-control on the relationship between authoritarian parenting style and externalizing behaviors to understand whether authoritarian parenting style reduces low self-control, which in turn leads to a reduction in externalizing behaviors.

As shown in Fig. 1, the independent variable has a negative and significant effect on the mediating variable (direct effect = -0.429; $p = 0.000$), and the mediating variable has a positive and significant effect on the dependent variable (direct effect = 0.317; $p = 0.000$). As for the independent variable, it has a negative and significant effect on the dependent variable (direct effect = -0.303; $p = 0.000$). Despite this, there was a standardized effect of 0.033, with a 95% confidence interval of -0.206 to -0.077, which suggests that the indirect effect tested is significant. This indicates a partial mediation relationship between the variables since, despite the significant direct effect between the dependent and independent variables, the authoritarian parenting style reduces externalizing behavior by reducing low self-control.

On the other hand, to analyze the mediation processes underlying the prediction of internalizing behaviors, the three models shown in Table 5 were processed.

The fourth model tested the mediating effect of low self-control on the relationship between the independent variable, permissive parenting style, and the dependent variable, internalizing behaviors. The results shown in Fig. 2 indicate that the independent variable has a positive and significant effect on the mediating variable (direct effect = 0.233; $p = 0.012$) and that the mediating variable influences the dependent variable in a positive and statistically significant way (direct effect = 0.325; $p = 0.000$). In turn, the independent variable has a

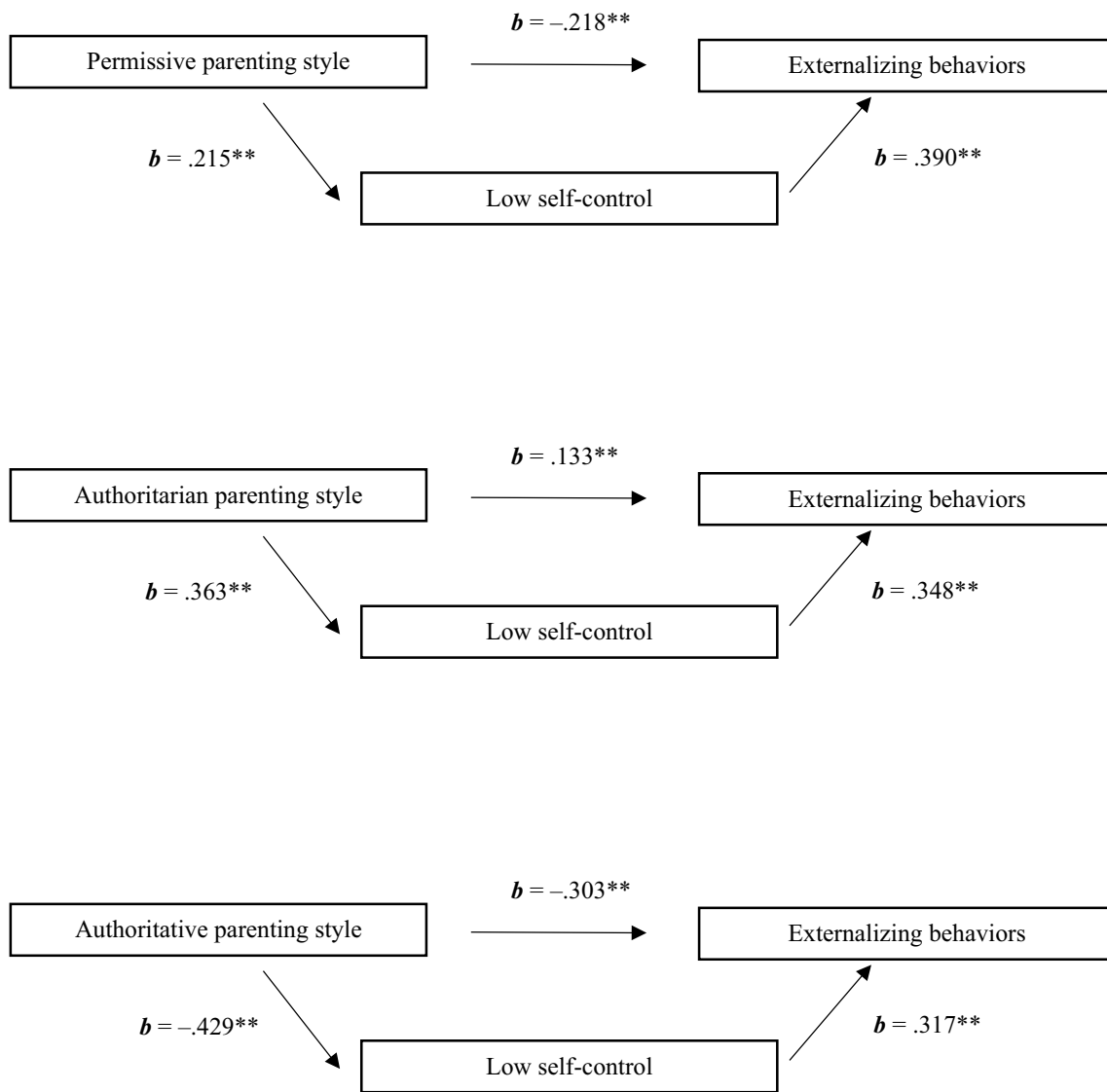


Fig. 1 Mediation models: permissive, authoritarian and authoritative parenting styles, externalizing behaviors, and low self-control

negative and significant effect on the dependent variable (direct effect = -0.248 ; $p = 0.024$). Despite this, there is a standardized indirect effect of 0.040 , with a 95% confidence interval of 0.000 to 0.158 , which means a partial mediation relationship exists. In other words, despite the significant direct effect recorded between the dependent and independent variables, the permissive parenting style contributes to the increase in levels of internalizing behaviors through its influence on the increase in levels of low self-control.

The fifth model investigated the mediating effect of low self-control on the relationship between authoritarian parenting style and internalizing behaviors. As can be seen in Fig. 2, it is possible to understand that the independent variable has a positive and statistically significant effect on the mediating variable (direct effect = 0.368 ; $p = 0.000$) and that

the mediating variable has a positive and significant effect on the dependent variable (direct effect = 0.251 ; $p = 0.000$).

The independent variable positively and significantly affects the dependent variable (direct effect = 0.229 ; $p = 0.007$). Finally, as in the previous model, there is a standardized indirect effect of 0.040 for a 95% confidence interval of 0.037 to 0.153). This indicates a partial mediation relationship because, despite the significant direct effect between the dependent and independent variables, the authoritarian parenting style contributes to an increase in internalizing behaviors through its positive influence on low self-control (Fig. 2).

The sixth model focused on analyzing the mediating effects of low self-control on the relationship between authoritative parenting style and internalizing behaviors. The results shown in Fig. 2 indicate that authoritarian

Table 5 Direct effects of X (independent variable) on M (mediating variable) and on Y (dependent variable), direct effects of M on Y and indirect effects of X on Y for each model using Low Self-Control as a mediator (M) and each of the Parenting Styles as predictors (X) of Internalizing Behaviors (Y)

	<i>b</i>	SE	95% CI	<i>T</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Permissive parenting style (X)						.127	.016	.012
Direct effects of X on M	.233	.093	.051/.414	2.513	.012			
Direct effects of M on Y	.325	.060	.206/.443	5.392	.000	.276	.076	.000
Direct effects of X on Y	-.248	.110	-.465/-.032	-2.260	.024			
Indirect effects of X on Y	.076	.040	.000/.158	-	-			
Authoritarian parenting style (X)						.260	.068	.000
Direct effects of X on M	.368	.068	.225/.491	5.294	.000			
Direct effects of M on Y	.251	.061	.131/.371	4.106	.000	.277	.077	.000
Direct effects of X on Y	.229	.084	.063/.395	2.716	.007			
Indirect effects of X on Y	.090	.030	.037/.153	-	-			
Authoritative parenting style (X)								
Direct effects of X on M	-.431	.070	-.567/-.294	6.210	.000	.301	.091	.000
Direct effects of M on Y	.160	.059	.041/.276	2.715	.007	.401	.161	.000
Direct effects of X on Y	-.589	.084	-.753/-.421	-6.958	.000			
Indirect effects of X on Y	-.069	.031	-.133/-.012	-	-			

b beta, *SE B* standard error, *CI* confidence interval, *T* *t*-test, *p* *p*-value, *R*² coefficient of determination

parenting style has a statistically significant negative effect on the mediating variable (direct effect = -0.431; $p=0.000$) and that the mediating variable has a positive and significant effect on the dependent variable (right effect = 0.160; $p=0.007$). In turn, the authoritative parenting style has a negative and significant effect on internalizing behaviors (direct effect = -0.580; $p=0.000$). Finally, there is a standardized indirect effect of 0.031 for a 95% confidence interval of -0.133 to -0.012). This suggests that, although the authoritarian parenting style contributes to a decrease in internalizing behaviors, there is a partial mediation relationship in that the authoritarian parenting style affects the decrease of internalizing behaviors by decreasing low self-control.

Discussion

The main goal of this research was to analyze and compare the relative influence of authoritative, authoritarian, and permissive parenting styles on children and youth's externalizing and internalizing behaviors and explore the indirect effects of self-control on this relation.

Thus, concerning the first research hypothesis, it was defined that authoritarian and permissive parenting styles positively influence children and youth's externalizing and internalizing behaviors. As for the authoritarian parenting style, the hypothesis was partially confirmed since this variable is a significant predictor only of internalizing behaviors. Nevertheless, this is a result that finds empirical support in different studies (e.g., Alizadeh et al., 2011; Akhter et al., 2011; Braza et al., 2015) which have shown cross-sectionally and longitudinally, that children exposed to a parenting style

based on levels of authority and behavioral demands, and little freedom of expression, present higher levels of internalizing behaviors (Akhter et al., 2011). Thus, the results observed in the current study might be related to the fact that parents who adopt this parenting style do not establish an interactive dialogue with their children and are, in most situations and life contexts, strict, rigid, and inflexible, both in terms of limits and in terms of the behavioral expectations they impose, not responding to their children's emotional and affective needs. As Amran and Basri (2020) suggest, this type of parenting incites certain negativity in children, leading to higher levels of internalizing behaviors, as demonstrated in this study, because when parents do not respond to their children's needs and emotions, tensions are created in terms of communication and family dynamics. This leads to what Rose et al. (2018, p. 1482) describe as "*parenting stress and child-rearing stress.*", leading children to look for opportunities to release their tensions when they enter other socialization contexts, and in many of these situations, internalizing behaviors occur.

On the other hand, the permissive parenting style variable is statistically significant being a statistically significant predictor of externalizing behaviors, suggesting that children's greater exposure to this parenting style leads to lower externalizing behaviors. This was one of the results that did not follow the same direction as previous studies (e.g., Akhter et al., 2011; Alizadeh et al., 2011; Braza et al., 2015), nor the research hypothesis defined for this study. This result might be explained by the fact that this parenting style has fewer direct and immediate consequences on this type of behavior in children during this development period (Rinaldi & Howe, 2012). On the other hand, this parenting style was the least reported by the children, so given the low levels of

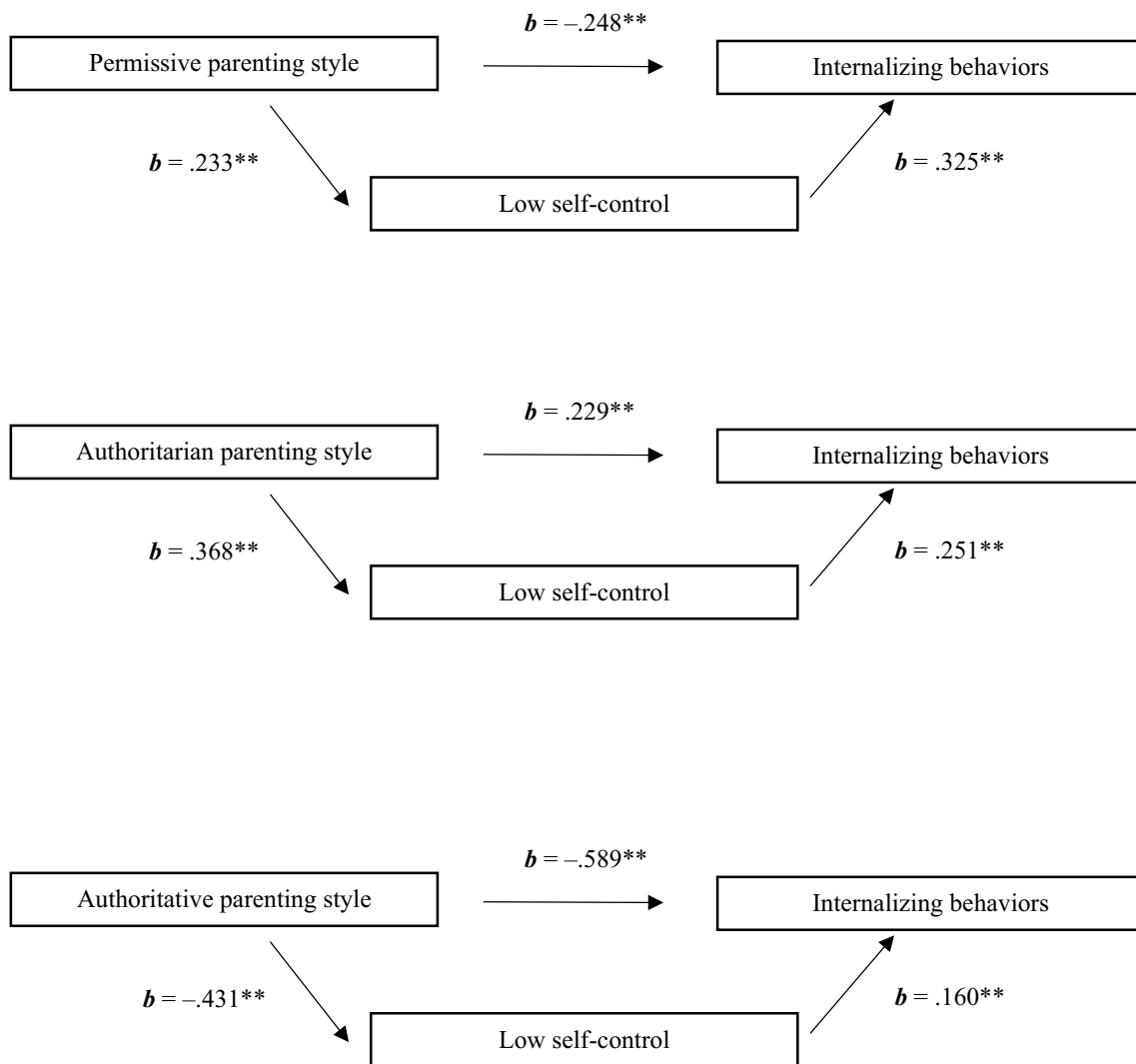


Fig. 2 Mediation models: permissive authoritarian and authoritative parenting styles, internalizing behaviors, and low self-control

this style in the sample, it is possible to understand why this relationship exists.

As for the second research hypothesis, it was defined that authoritative parenting style negatively influences the externalizing and internalizing behaviors of children and young people. This hypothesis was confirmed since the authoritarian parenting style variable was statistically significant, indicating that children exposed to this style have lower externalizing and internalizing behaviors. These results align with others from previous studies (e.g., Pinquart, 2017; Rinaldi & Howe, 2012). As such, the results found in this study might be explained by what Rose et al. (2018) propose, i.e., authoritative parents are warm from an affective point of view, set clear and structured limits for their children's actions and behaviors, and can adapt them to their needs. This makes children develop greater levels of affection for their parents and feel safe and understood in the

relationships they establish with them, leading to lower levels of internalizing and externalizing behaviors. As Baumrind et al. (2010) argue, childhood is a period of development in which children begin to create their independence and capacity for autonomy, and authoritarian parenting is ideal for providing children with the right support for this development.

The third research hypothesis states that the externalizing and internalizing behaviors increase as age increases. This hypothesis was partially confirmed, considering that the age of the children was a significant predictor only of internalizing behaviors. There have been mixed results in the literature (e.g., Bishop et al., 2020; Bongers et al., 2003; Crijnen et al., 1997). However, the results obtained in the current study might be explained because the children and youth who took part in the study were starting puberty, a developmental period in which various hormonal, social,

and behavioral changes occur, which may make this behavior more likely to occur. This reality was tested in the study by Bishop et al. (2020), which found that levels of externalizing behaviors increased between the ages of 11 and 15 and decreased when the children were between 16 and 20. In this sense, longitudinal studies are needed to understand better the evolution of these behaviors over different age groups and the individual, community, and social factors that can affect their development.

Furthermore, the fourth research hypothesis states that girls report more internalizing behaviors, and boys are more likely to report more externalizing behaviors. This hypothesis was partially confirmed, as being female significantly predicts both externalizing and internalizing behaviors, which also contradicts the results from previous studies (e.g., Bongers et al., 2003; Campos et al., 2014; Chaplin & Aldao, 2013; Crijnen et al., 1997). Regarding internalizing behaviors, according to Chaplin and Aldao (2013), this result could be explained by the tendency of girls, especially during adolescence, to be more emotionally expressive. On the other hand, Brown (1999) states that the expression of externalizing behaviors has become increasingly common among adolescents and is more prevalent in female children, potentially reflecting a change in gender roles in today's society. However, longitudinal research would be necessary to analyze how the expression of these behaviors changes from childhood to adulthood. The result regarding internalizing behaviors aligns with previous studies' findings (e.g., Bongers et al., 2003; Campos et al., 2014; Crijnen et al., 1997) and with the hypothesis defined in the study. As shown by Bongers et al. (2003), the prevalence of internalizing behaviors between boys and girls in childhood does not differ. However, with the onset and entry into adolescence, an increase in internalizing behaviors in girls is common, which can be explained by the fact that girls struggle earlier with physical, hormonal, and behavioral changes that can lead to a greater expression of this type of behavior due to the uncertainty and instability typical of this period of development (Bongers et al., 2003).

The fifth research hypothesis tested in the current study which proposes that low self-control in children and youth is positively associated with externalizing and internalizing behaviors, was fully confirmed. Other studies have widely documented the relationship between low self-control and externalizing and internalizing behaviors (e.g., Bai et al., 2020; Van Prooijen et al., 2018; Zhang & Wang, 2022). Thus, children with low self-control are characterized by being more impulsive, egocentric, preferring simple, physical, and risky activities, and having a difficult temperament (Gottfredson & Hirschi, 1990). As such, the results of the current study might be understood in light of what Zhang and Wang (2022) propose since children with low self-control have greater difficulty in redirecting their attention away

from impulses, and if this tendency continues, they are more likely to adopt externalizing behaviors. As for internalizing behaviors, the authors highlight the attentional component of self-control, in that children with low self-control have difficulty shifting their attention from negative to positive aspects and may develop more internalizing behaviors (Eisenberg et al., 2001). In turn, the fact that low self-control is a stronger predictor of externalizing behavior can be understood from the research carried out by Krueger et al. (1996). The authors analyzed low self-control as a specific risk factor for externalizing behaviors. Through laboratory tasks, they concluded that children with externalizing behaviors tended to seek immediate gratification more than children with internalizing behaviors.

The last hypothesis states that low self-control in children and youth has a mediating effect on the relationship between parenting styles and externalizing and internalizing behaviors, i.e., each parenting style influences externalizing and internalizing behaviors through its influence on increasing and/or decreasing low self-control. The hypothesis was partially confirmed because low self-control significantly mediated the relationship between parenting styles and externalizing and internalizing behaviors in only five of the six models tested. Thus, each parenting style influences externalizing and internalizing behaviors, and parenting styles also influence low self-control, which influences externalizing and internalizing behaviors.

As for the partial mediation models that were confirmed, the results of the analyses follow the same direction as those found in other empirical research that has analyzed the relationship between several aspects of parenting, self-control, and behavior problems, including externalizing and internalizing behaviors (e.g., Liu et al., 2019; Pan et al., 2021; Tehrani & Yamini, 2020; Van Prooijen et al., 2018; Zhang & Wang, 2022). The results of the current study might be explained by the fact that positive parenting, as the authoritative parenting style, contributes to lower levels of externalizing and internalizing behaviors through its influence on reducing low self-control. On the other hand, children exposed to negative parenting, such as authoritarian and permissive parenting styles, show more externalizing and internalizing behaviors due to the influence of these parenting styles on higher levels of low self-control.

In this regard, there is a debate in the scientific literature about whether it is more appropriate to talk about the role of low self-control in terms of total or partial mediation, and there are some gaps in the literature due to the mixed results found. The study by Tehrani and Yamini (2020) set out to fill this gap based on the idea that low self-control may not be able to "absorb" all the effects of parental practices and styles on externalizing and internalizing behaviors, so in the light of this study, as in the present research, the partial mediation model is the most appropriate to describe the

relationship between these dimensions and variables under analysis. Thus, these results, in the light of what Tehrani and Yamini (2020) explain based on the General Theory of Crime (Gottfredson & Hirschi, 1990), allow us to argue that children exposed to ineffective or inadequate parenting styles are not exposed to the necessary parenting and socialization practices that allow them to develop adequate levels of self-control, which in turn explain the emergence of externalizing and internalizing behaviors.

The opposite is also possible, i.e., when parents do not fail to emotionally support the child, monitor their behavior, and exert effective discipline and control. From authoritative parents, children learn, for example, to control their impulses, postpone their immediate gratification, be less egocentric, develop adequate self-control, and, as such, are less likely to adopt externalizing and internalizing behaviors. In short, externalizing and internalizing behaviors could be prevented if parents adopted appropriate socialization and education strategies, such as those typical of an authoritative parenting style (Pan et al., 2021; Tehrani & Yamini, 2020; Zhang & Wang, 2022). Therefore, the results presented reinforce the importance of studying self-control and different parenting styles in the emergence and development of externalizing and internalizing behaviors while explaining the mechanisms by which this influence occurs.

Limitations and Directions for Future Research

Despite the added value of the current study, it is not immune to some limitations. First, this study used a convenience sample of middle-school children from a restricted geographical area, thus impeding the generalization of the results. Future research should consider using a probabilistic sample of children from different geographical areas and cultural backgrounds. In line with this, it would be interesting that future research explores, in greater detail, the specific influence that some cultural features might exert in the explanation of the observed results (e.g., education, values, beliefs). In fact, previous studies have suggested that child-rearing (e.g., parenting styles) might be influenced by cultural values and that its impact on children's behavior and adjustment might vary, depending on whether the adopted parenting strategies are considered more or less usual and accepted (e.g., Bornstein, 2013; Gershoff et al., 2010; Tehrani & Yamini, 2020).

Also, it would be interesting that future studies explore and analyze the potential maintenance of the results found with samples with low, medium, and high levels of antisocial and delinquent behavior, and not just normative ones, as the one used in the current study, while exploring further the gender differences for the relationships analyzed in the

current study (particularly considering the mixed results found in previous studies, as described above; e.g., Braza et al., 2015; Chui & Chan, 2016; Pechorro et al., 2021; Pinquart, 2017).

In addition, there might have been a margin of bias in the data due to the self-report nature of the questionnaires. This bias may have occurred due to the children's reduced ability to remember past behaviors and/or events since for externalizing and internalizing behaviors, the children were asked to refer to behaviors adopted over the last six months. On the other hand, one can exclude the possibility of distortions or difficulties in understanding some of the questions, which might have influenced the results observed.

Finally, it is important to note that this was a correlational study, thus limiting the possibility of understanding the bidirectional influences of the variables and dimensions under study. This is important since other authors and previous studies have shown that the influence of parenting styles on externalizing and internalizing behaviors is a relationship that can be bidirectional because children with certain levels of externalizing and internalizing behaviors can trigger the adoption of specific parenting styles in their parents (Pardini et al., 2008; Pinquart, 2017). Thus, although this study demonstrated that parenting styles have a transversal and important influence in explaining externalizing and internalizing behaviors and the role of low self-control in this relationship, it does not allow us to understand whether externalizing and internalizing behaviors and low self-control explain parenting styles. As such, future studies should, using a multi-informant and multi-method approach, seek to understand the cumulative influences of parenting styles on externalizing and internalizing behaviors over different developmental periods, which is only possible through a longitudinal research design.

Implications

Despite the above-mentioned limitations and its exploratory nature, this study has several strengths and important theoretical and practical implications. First, this study extends previous research into the influence of parenting styles on the externalizing and internalizing behaviors of children and youth while also helping to understand the variables that predict these behaviors. In addition, the mediation analyses contributed to the scarce evidence and mixed results regarding the specific role that low self-control plays in the relationship between parenting styles and externalizing and internalizing behaviors.

Moreover, this study provides critical insights for developing prevention and intervention strategies targeting parents, children, and youth. By emphasizing the importance of specific factors consistently identified as crucial predictors

of externalizing and internalizing behaviors, this research informs the design of targeted interventions. Specifically, it enhances our understanding of which parenting styles are most likely to contribute to the emergence, prevention, or reduction of these behaviors (Pinquart, 2017). This knowledge is essential for crafting prevention programs and intervention strategies that are not only grounded in theory but also supported by robust empirical evidence (Akhter et al., 2011; Hovee et al., 2009; Kawabata et al., 2011; Kazdin, 2001).

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Data Availability Not applicable.

Declarations

Conflict of interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethical Approval The authors declare that the appropriate ethics committee approved the study. Furthermore, the study received approval from the Directorate General for Education through its monitorization platform. Informed consent was obtained from all participants, and the necessary authorizations were obtained before data collection procedures.

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