CHILD-TO-PARENT VIOLENCE: CHALLENGES AND PERSPECTIVES IN THE CURRENT SOCIETY

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CHILD-TO-PARENT VIOLENCE: CHALLENGES AND PERSPECTIVES IN THE CURRENT SOCIETY

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EDITORIAL
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Editorial: Child-to-Parent Violence: Challenges and Perspectives in Current Society

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Keywords: child-to-parent violence, adolescents, family violence, assessment, young offenders, psychosocial variables

Editorial on the Research Topic

Child-to-Parent Violence: Challenges and Perspectives in Current Society

Violence committed by young people is a major concern in modern society, with regular media reports about juvenile violence in various contexts and relationships. In the last decade, rates of child-to-parent violence (CPV) have risen dramatically, becoming a significant social problem in some countries. For instance, the Spanish Prosecutor's Office (2020) revealed that police reports of CPV increased by 8% from 4,665 cases in 2017 to 5,055 cases in 2019. This increased awareness of CPV in Spain has resulted in a greater investment in CPV research.

This Research Topic aimed to advance our understanding of CPV across different cultures and populations. It considered the perspectives of both parents and children and comprises one theoretical review and eight original research papers that consider the measurement of CPV and factors related to the development and maintenance of this violent behaviour.

Drawing upon previous definitions used to describe CPV in research, Ibabe developed a theoretical definition of CPV and a typology which described four types, which differ according to the level of coercion and nature of the violence. This review also evaluated eleven instruments that measure CPV according to the Consensus-based Standards for the Selection of Health Measurement Instruments guidelines. Ibabe concluded that the Child-to-Parent Violence Questionnaire (CPV-Q) was the leading instrument in the field, with an additional three instruments showing promise.

Ibabe's research highlighted that most CPV instruments are solely designed to be used with adolescents. However, examining parents' perspectives on the frequency and nature of CPV is critical to understanding this phenomenon. Contreras et al. validated the Child-to-Parent Violence Questionnaire—Parents' version (CPV-Q-P) in a large sample of parents of adolescents. The findings suggested that the measure had strong psychometric properties, and that participants reported that their children frequently engaged in CPV behaviours. Parents reportedly attributed their children's CPV behaviours to instrumental reasons instead of viewing CPV as the result of impulsive emotional reactions.

Seven papers considered factors related to CPV. Martínez-Ferrer et al. explored the relationship between CPV, psychological distress and self-perception within familial and social contexts among adolescents recruited from Mexican schools. They found that the adolescents who engaged in CPV showed higher levels of psychological distress and suicidal ideation, and poorer self-concept within familial and social contexts than non-aggressor adolescents. The

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authors also found that, although boys were more frequently involved in CPV, girls who were violent showed greater adjustment difficulties. Similarly, Seijo et al. also found that Spanish adolescents displayed poorer psychological, personal, and educational adjustment than non-aggressors, which was related to both victimisation by parents and CPV. Adolescents who engaged in CPV also reported greater strictness and supervision from their parents, with those who were violent towards their mothers reporting low parental warmth.

Although previous studies have noted the importance of individual, family and social variables in CPV, these relationships are complex. Cano-Lozano et al. used structural equation modelling in a large sample of Spanish adolescents to further explore the relationship between parental warmth and CPV through cognitive (hostile attribution), emotional (anger), and social (deviant peers and drug use) variables. They found that the lack of perceived parental warmth was related to hostile attribution and anger. The combination of these factors was associated with an increase in the frequency of reactive CPV behaviours. Perceived parental criticism-rejection was also related to a greater likelihood of associating with deviant peers and drug use, which increased the likelihood of both reactive and instrumental CPV.

Suárez- Relinque et al. examined CPV within a large sample of Mexican adolescents recruited from schools. The authors considered factors such as the problematic use of social networking sites and perceived non-conformist social reputation that have been studied in the broader adolescent violence literature, but have scarcely been examined in the context of CPV. Results suggested that psychological distress, social media usage, non-conformist reputation, and problematic communication with parents were related to CPV.

Three studies explored individual and family variables related to CPV among justice-involved youth. Hernández et al. explored the differences between CPV offenders, non-CPV offenders, and non-offending adolescents. They found that both groups of offenders reported higher frequency of drug use and lower academic performance compared to the non-offender group. Furthermore, CPV offenders reported poorer perceptions of themselves within their families and higher rates of exposure to violence at home when compared to the other groups. Fandiño et al. explored whether individuals who engaged in CPV displayed deficits in psychological adjustment and executive functioning. The results suggested that, compared to the psychometric test norms, young offenders who engaged in CPV displayed significantly higher psychological maladjustment, clinical deterioration, and deficits in executive cognitive functioning. Finally, Vecina et al. explored whether young offenders who were violent towards their parents differed compared to those who were violent towards their partners on five moral foundations (care, fairness, loyalty, authority, and purity). Disregard for authority was the only foundation that independently differentiated CPV offenders from those who were violent against their partners, as CPV offenders were more likely to have negative attitudes towards authority. CPV offenders were also more likely to justify their violence and perceive themselves as aggressive compared to the partner violence group.

This Research Topic generated new theoretical and empirical knowledge on CPV, yielding significant contributions to this field and addressing important issues such as its conceptualisation and assessment. It provided an integrated definition and developed a typology of CPV to delineate four types of CPV behaviour. Additionally, it described the validation of a new measure that can be completed by parents and provided valuable information for researchers and clinicians regarding the evidence base related to the assessment of CPV.

Although the relationship between CPV and parenting practises has previously been demonstrated, this Research Topic enhanced our understanding of the mechanisms underlying this relationship, while also exploring novel variables that have not been previously considered in relation to CPV (i.e., problematic use of social networks sites, perceived non-conformist social reputation, executive functioning and moral foundations). In line with the Socio-Ecological Model, these articles highlight the importance of the interactions between factors from the individual, familial, and social domains to explain this type of violence. Future studies should continue investigating the mechanisms of effect to strengthen our understanding and formulation of CPV behaviour while also identifying ways that we can intervene to either prevent or stop a pattern of CPV from developing.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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ORIGINAL RESEARCH
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Analyzing the Relationship Between Child-to-Parent Violence and Perceived Parental Warmth

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The relationship between child-to-parent violence (CPV) and the perceived parental warmth dimension has been well established. However, it is necessary to further investigate the nature of this relationship considering the involvement of other variables. The objective of this study was to analyze the role of cognitive (hostile attribution), emotional (anger), and social variables (deviant peer group and drug use) in the relationship between the perceived parental warmth dimension (warmth-communication and criticism-rejection) and CPV motivated by reactive or instrumental reasons. The community sample consisted of 1,599 Spanish adolescents (54.8% girls) between the ages of 12 and 18 years (M_{age} = 14.6, SD = 1.6 years) from different secondary schools in Jaén (75.3%) and Oviedo (24.7%) (Spain). Each participant completed the Child-to-Parent Violence Questionnaire (CPV-Q), the Warmth Scale (WS), adolescents' version, the Social Information Processing (SIP) in Child-to-parent Conflicts Questionnaire and Deviant Peers and Drug Use Questionnaires. The results indicate that perceived parental warmth is negatively correlated with hostile attribution, adolescent anger, relationship with a deviant peer group, while perceived parental criticism is positively linked to these variables. Likewise, hostile attribution and adolescent anger are positively linked to reactive CPV. Relationship with a deviant peer group is associated with drug use, which also predicts both reactive and instrumental CPV. In sum, a lack of perceived parental warmth has important repercussions in the form of the psychological and social maladjustment of children, which in turn is differentially correlated with reactive or instrumental CPV. Thus, prevention and intervention programs for CPV should consider, on the one hand, working with parents on parental practices that incorporate parental warmth as a fundamental element and, on the other hand, working with children on cognitive, emotional, and social aspects, taking into account the different motivations for this type of violence.

Keywords: anger, child-to-parent violence, drug use, hostile attribution, instrumental reasons, peer group, perceived parental warmth, reactive reasons

INTRODUCTION

Child-to-parent violence (CPV) has grown dramatically in the last decade, leading to an increase in research on this topic in different countries (e.g., Beckman et al., 2017 in Germany; Contreras and Cano-Lozano, 2015, 2016 in Spain; Margolin and Baucom, 2014 in the United States; Pagani et al., 2009 in Canada; and Simmons et al., 2018 in Australia). This type of family violence has been defined as "any act of a child that is intended to cause physical, psychological, or financial damage to gain power and control over a parent" (Cottrell, 2001, p. 3). More recently, other authors note that this type of violent behavior is also aimed to dominate parents (Howard and Rottem, 2008; Molla-Esparza and Aroca-Montolío, 2018).

There are a wide variety of behaviors that reflect different types of CPV. Following Cottrell (2001), psychological violence includes, for example, intimidations or threats and also verbal behaviors such as insulting or shouting. Physical violence refers to acts such as punching, pushing or kicking. Financial violence includes behaviors such as stealing money, destroying the home or incurring debts the parents must cover. The control, power and domination over parents is reflected in such behaviors as making unrealistic demands on parents (for example, insisting they drop what they're doing to comply with the child's demands) or controlling the running of the household. These types of abuse can occur at the same time, and in fact, they overlap to a certain extent (Cottrell, 2001), resulting in an escalation of violence from psychological abuse to more severe form of violence such as physical abuse (Cottrell, 2001; Eckstein, 2004). In addition, in line with what has been indicated for other types of violence that manifest in other contexts, different authors have pointed out that CPV can be reactive or instrumental (Calvete et al., 2015; Calvete and Orue, 2016; Contreras et al., 2019, 2020). Reactive violence is characterized by anger (Poulin and Boivin, 2000) and hostile attributions (Orobio de Castro et al., 2002; Arsenio et al., 2009) and is a response to a previous provocation, real or perceived (Crick and Dodge, 1996). Instrumental violence refers to the use of aggression to obtain what one wants to get something (Crick and Dodge, 1996).

The prevalence rates of CPV, although quite different depending on the characteristics of the study, are very high, which shows the magnitude of the problem. Studies from Canada and the United States, applying as the CPV criterion the occurrence of violent behavior on at least one occasion, have found percentages of verbal violence toward mothers between 19 and 64% and toward fathers between 8 and 56%. The percentage of mothers who have experienced physical violence ranges between 8 and 13.8%, and that of fathers is 6–11% (Pagani et al., 2004, 2009; Margolin and Baucom, 2014). For financial violence, the percentages are 22% for mothers and 11% for fathers (Margolin and Baucom, 2014). In Spain, the percentages for psychological violence are 90.6–92.2% for mothers and 79.5–86.5% for fathers, whereas the percentages for physical violence are 6.4–19.1% toward mothers and 5.4–16.6% toward fathers (Calvete and Orue, 2016; Calvete et al., 2017; Rico et al., 2017). For financial violence, the percentages are 26.9% for mothers and 23.7% for fathers (Rico et al., 2017).

In recent years, research on this phenomenon has been extensive, generating abundant information about the relationship between various individual, family, and social variables and the development and maintenance of CPV. In this sense, the study of variables related to the family environment has aroused great interest because this is the context in which this type of violence takes place (Ibabe, 2016; Gallego et al., 2019). More specifically, in the analysis of family dynamics, it has been common to resort to the study of parenting styles. Maccoby and Martin (1983) redefined the initial proposal of three parenting styles (democratic, authoritarian, and permissive) of Baumrind (1971) into to two dimensions: (a) responsiveness, which refers to affective, warmth, acceptance, and support, and (b) demandingness, which refers to the use of control and supervision. From the combination of these two dimensions, four parenting styles emerge: authoritarian, authoritative, permissive-indulgent and neglectful.

The relationship between parenting style and CPV is complex. Some studies have found a relationship between CPV and the authoritarian style in community samples (Ibabe et al., 2013; Suárez-Relinque et al., 2019) and between CPV and a permissive and neglectful style in both community samples (Gámez-Guadix et al., 2012; Ibabe et al., 2013) and forensic samples (Castañeda et al., 2012; Contreras and Cano-Lozano, 2014). However, other studies with community samples have not found a relationship between the permissive style and CPV (Calvete et al., 2015; Suárez-Relinque et al., 2019). Considering this scenario, it has been considered more useful at the empirical level to focus on specific parental dimensions or practices.

Studies that analyze parental dimensions separately agree that the responsiveness dimension makes the difference in CPV. Specifically, parental warmth is a protective factor against physical CPV from adolescent girls (Beckman et al., 2017). In addition, both studies with adolescents and young people have found that the absence of parental warmth is fundamental in the development of CPV (Gámez-Guadix et al., 2012; Calvete et al., 2015). Other studies highlight the importance of the maternal figure in this dimension. For example, Ibabe et al. (2013) found that CPV was associated with emotional rejection by the mother. In the forensic field, Contreras and Cano-Lozano (2014) identified that what differentiated juveniles charged with CPV offenses from other juvenile offenders was precisely the parental warmth dimension. Specifically, juveniles charged with CPV offenses perceived less warmth and more criticism, especially from their mothers, than juveniles charged with other types of crimes and non-offending minors. More recently, Zhang et al. (2019) found that maternal emotional warmth is associated with fewer behaviors of contempt and rebellion toward mothers by adolescents and that maternal rejection is related to more rebellion behaviors toward the mother.

However, the lack of parental warmth as a risk factor does not explain by itself how this leads adolescents to be violent toward their parents. The effects of the lack of parental warmth on the problematic behaviors of the children may be influenced by other variables. The interpersonal acceptance-rejection (IPAR) theory is an evidence-based theory that attempts to explain and predict the main antecedents, consequents, and correlates

of parental acceptance/rejection (Rohner et al., 2012). Parental acceptance refers to warmth, affection, support, or simply the love of parents toward their children. Parental rejection, in turn, refers to the absence or withdrawal of some of these aspects. According to IPAR theory, parental rejection can be expressed by: (1) coldness/lack of affection; (2) hostility/aggression; (3) indifference/neglect; and (4) undifferentiated rejection. According to the theory, there is a biological need for acceptance from the most significant people. Thus, children need to be accepted by their parents, that is, they need to feel parental warmth, affection or support. More specifically, individuals who perceive parental rejection are likely to develop (1) anger, hostility/aggression, (2) dependence or defensive independence, (3) negative self-esteem, (4) negative self-adequacy, (5) emotional instability, (6) lack of emotional response, and (7) a negative worldview (Rohner, 1999). People who feel rejected are likely to develop a negative worldview (Rohner, 1999). This has significant negative effects on the psychological adjustment of children and on their behavior and relationships with others.

The relationship between perceived parental rejection and the psychological maladjustment of children has been identified in many studies (e.g., Khaleque and Rohner, 2002, 2012; Khaleque, 2013, 2015) and statistically confirmed in meta-analytic studies (e.g., Khaleque, 2013, 2017). In a meta-analysis that included 30 studies from 16 countries, Khaleque (2013) found that perceived maternal and paternal warmth/affection were positively related with psychological adjustment, independence, positive self-esteem, positive self-adequacy, emotional responsiveness, emotional stability, and positive worldview and negatively related with children's self-reports about hostility/aggression. A more recent meta-analysis by Khaleque (2017) found that both perceived maternal and paternal hostility and aggression were positively related with the psychological maladjustment of children and the seven negative personality dispositions. The results also indicate that the relationships are slightly but significantly stronger in mothers than in fathers.

In early childhood, the regulation of emotions and behaviors depends largely on parental support (Eisenberg et al., 1998; Morris et al., 2007). Some researchers (Gottman et al., 1997; Eisenberg et al., 1998) have suggested that one reason for the association between parental warmth/positive expressivity and child externalization problems is its effects on emotional regulation in children. According to this view, warm, positive parents contribute to the regulation of their children. Along these lines, the emotional socialization practices of parents promote self-regulation skills in children and reduce the risk of external symptoms (e.g., Eisenberg et al., 2005; Valiente et al., 2007). Likewise, some children who experience negative parental affection may feel rejected by their parents and this can promote the development of internalizing symptoms. Moreover, children can also develop externalizing problems by imitating the negative emotional expression of the parents (Stocker et al., 2007). In short, perceived parental rejection is one of the main causes of behavioral problems in childhood and adolescence, and it could have these effects through cognitive and emotional variables.

In the context of CPV, few studies have analyzed cognitive and emotional variables, although these variable types have recently aroused the interest of different researchers. Regarding the cognitive variables, hostile attribution in adolescents is prominent in the development of CPV (Calvete et al., 2015; Rosado et al., 2017). Contreras and Cano-Lozano (2015, 2016), in their studies of forensic samples, indicated that minors who had committed CPV offenses presented a more hostile perception of their parents and their home in general than other juvenile offenders and non-offenders. The literature on general violent behavior indicates that hostile attribution is linked to reactive violence (Orobio de Castro et al., 2002; Arsenio et al., 2009), although in a previous study on CPV, this specific relationship with reactive violence was not found (Contreras et al., 2020), so it is necessary to continue investigating this issue. Regarding emotional variables, adolescents who assault their parents often have emotional difficulties, specifically in controlling (Beckman et al., 2017), identifying, and expressing their emotions (Martínez-Ferrer et al., 2018). One of the most relevant emotional variables is anger, which makes them more likely to behave aggressively in general (e.g., Fives et al., 2011). In this context, anger is a fundamental variable in the development of CPV (Calvete et al., 2015; Loinaz and de Sousa, 2019), and this variable predicts CPV toward the mother (Orue et al., 2019). These results are confirmed in samples of young people aged 18–25 years, with anger being a predictor of CPV toward both parents (Simmons et al., 2020). Other studies have delved further into this variable, indicating that anger predicts reactive CPV toward both the father and the mother (Contreras et al., 2020).

The perceived parental warmth dimension has also been related to problematic behavior in adolescents through the roles of other social variables, such as relationship with a deviant peer group and drug use. Low maternal support has been indirectly related to participation in criminal activities through the child's affiliation with deviant peers (Deutsch et al., 2012). Trudeau et al. (2012) found that parenting that includes affection, discipline, standard setting, and monitoring indirectly predicts, through deviant peers, externalizing problems, including violent and aggressive behavior. Van Ryzin and Dishion (2013) showed that coercive family interactions led to coercive relationships with peers and, consequently, to violent behavior in early adulthood. In contrast, although other studies found that the effects of parental knowledge on different types of problematic behaviors were mediated by the child's affiliation with deviant peers, they did not find significant effects of parental support, parental control, and parental solicitation (Cutrín et al., 2019). In turn, monitoring and quality in family relationships has been correlated with smoking and drinking through deviant peer groups (Van Ryzin et al., 2012). More specifically, parenting is related to externalizing behavior problems through deviant peers, and parenting is related to drug use through peers who use drugs (Cox et al., 2017).

In the field of CPV, research on these social variables is much scarcer, but in general, studies conducted on both community samples and clinical and forensic samples reveal that adolescents who assault their parents tend to relate with deviant peer groups (Kennedy et al., 2010; Calvete et al., 2011; Castañeda et al., 2012; Del Moral et al., 2015; Loinaz and de Sousa, 2019). As suggested by Cottrell and Monk (2004), the peer group constitutes a

behavioral model in which violence is used to obtain power and control over others so that adolescents learn these violent behaviors and use them in their relationships with their parents. Regarding the study of drug use in the field of CPV, numerous studies on adolescents show that drug use is positively associated with this type of violent behavior (Calvete et al., 2011; Ibabe et al., 2013; Beckman et al., 2017; Rico et al., 2017; Rosado et al., 2017). In this sense, some researchers point out that drug use increases the risk of verbal aggression toward the father and mother by approximately 50–60% (Pagani et al., 2004, 2009). However, as noted by Simmons et al. (2018), in community samples, the effect sizes are small, and in forensic samples, the use rates are similar to those of offenders in general (Contreras and Cano-Lozano, 2015), suggesting that substance use may be part of an underlying pattern of antisocial behavior rather than a specific causal factor in child-to-parent abuse (Simmons et al., 2018). In any case, what seems to be true is that drug use clearly contributes to the emergence of conflicts between parents and children (Contreras and Cano-Lozano, 2015; Armstrong et al., 2018) and that this can occur in different ways because the relationship is complex. In turn, reactive violent behaviors (characterized by an intense emotional response) occur under the influence of drugs due to the verbal and behavioral disinhibition engendered by drug use (Goldstein, 1995). In the context of CPV, frequent substance use can facilitate verbal disinhibition in confrontations with parents, increasing the risk of violent verbal behavior (Pagani et al., 2004) that can escalate to physical aggression (Pagani et al., 2009). In fact, Contreras and Cano-Lozano (2015) observed in forensic sample that 46.7% of minors charged with offenses of abuse toward their parents admitted that the aggressions had taken place under the influence of drugs. In turn, there are also instrumental or functional violent behaviors exercised mainly to obtain money for drugs (Goldstein, 1995). Recent studies indicate that getting more money from parents is one of the reasons for CPV (Calvete and Orue, 2016; Contreras et al., 2019, 2020).

The literature also reveals a close relationship between a deviant peer group and drug use during adolescence (e.g., Fergusson et al., 2002; Duan et al., 2009; Kendler et al., 2014). Regarding CPV, in Spain, it has been observed recently that a deviant peer group predicts drug use, which in turn is linked to violent behavior toward parents (Del Hoyo-Bilbao et al., 2020), i.e., there is an indirect effect of the deviant peer group on CPV through drug use. At the same time, these authors found that affiliation with a deviant peer group was influenced by family variables such as a lack of parental support or parental inefficiency.

Current Study

The previous literature shows the relationship between CPV and the perceived parental warmth dimension, but it is necessary to further investigate this relationship given the complexity of the topic. It is likely that the effects of perceived lack of parental warmth on CPV occur through other variables. In other research fields, numerous studies have identified a relationship between perceived parental rejection and the psychological maladjustment of children, but no study has analyzed it specifically in relation to CPV. In addition, it would be of great interest to identify the reasons that motivate CPV according to the detected effects. Thus, the purpose of this study is to further investigate the relationship between the perceived parental warmth dimension and CPV through other variables, including cognitive, emotional and social variables. More specifically, our objective is to analyze the role of cognitive (hostile attribution), emotional (anger), and social variables (deviant peer group and drug use) in the relationship between the perceived parental warmth dimension (warmth-communication and criticism-rejection) and CPV motivated by reactive or instrumental reasons. The hypotheses of this study were as follows: (1) Warmth-communication is negatively correlated with anger, hostile attribution, and relationship with a deviant peer group (Trudeau et al., 2012; Khaleque, 2013), while criticism-rejection is positively correlated with these variables (Khaleque, 2017; Van Ryzin and Dishion (2013). (2) Hostile attribution (Orobio de Castro et al., 2002; Arsenio et al., 2009) and anger (Poulin and Boivin, 2000; Contreras et al., 2020) are positively correlated with CPV motivated by reactive reasons. (3) Relationship with a deviant peer group is positively correlated with drug use (Del Hoyo-Bilbao et al., 2020), which in turn is positively correlated with CPV motivated both by reactive reasons (Pagani et al., 2004; Contreras and Cano-Lozano, 2015) and instrumental reasons (Calvete and Orue, 2016; Contreras et al., 2019, 2020).

MATERIALS AND METHODS

Sample

The sample was made up of 1,599 Spanish adolescents (54.8% girls) aged between 12 and 18 years (M_{age} = 14.6, SD = 1.6 years) from a community population and they were recruited from eight public and private secondary schools in Jaén (75.3%) and Oviedo (24.7%) (Spain). Regarding marital status, most of the parents were married (83.4%).

Previously, the minimal sample size was calculated at 95% confidence level, with a 5% confidence interval at 80% of statistical power. The estimated minimum sample size was 385. According to Hair et al. (2010), the general rule to calculate the minimum sample size for factor treatment in a survey is to have a minimum of 5 observations per variable (5:1). In the current study, the scales consisted of 138 items, so the minimum for the factorial treatment would be 690.

Instruments

The information on the validity and reliability of all assessment instruments in this study is described in the "Results" section.

The Child-to-Parent Violence Questionnaire (CPV-Q) (Contreras et al., 2019). The CPV-Q consists of 14 parallel items (for the father and for the mother) that measure psychological (four items), physical (three items), and financial violence (three items), together with behaviors of control and dominion over their parents (four items). The CPV-Q asks the adolescents to indicate the frequency of the behaviors against their parents in the past year using a 4-points scale: 0 (never), 1 (rarely = it has occurred once), 2 (sometimes = 2–3 times), 3 (many times = 4–5 times), and 4 (very often = more than 6 times). It also includes

a scale with 8 items on the reasons for the aggressions, 3 items referring reactive reasons (RR) and 5 items to instrumental reasons (RR), each answered a 3-points scale: 0 (never), 1 (sometimes), 2 (almost always), and 3 (always). Higher scores indicate more CPV and more frequency of RR an IR.

The Warmth Scale (WS), adolescents' version (Fuentes et al., 1999). The WS is made up of 20 items, divided into two factors: (a) Warmth-communication and (b) Criticism-rejection by parents toward their children. Each factor consists of 10 items rated on a scale ranging from 1 (never) to 5 (always). Higher scores indicate more warmth-communication and more criticism-rejection.

The Social Information Processing (SIP) in Child-to-parent Conflicts Questionnaire (Calvete et al., 2015). The anger and hostile attribution scales were used for this study. Adolescents were asked to imagine three scenes of different conflicts with their parents, and they had to respond to each item on a 5-point response scale ranging from 0 (not at all) to 4 (to a great extent): (a) hostile attribution, which included the attribution of negative intentions and positive emotions in parents (2 items per scene, 6 items in total); (b) anger (1 item per scene, 3 items in total). Higher scores indicate more anger and hostile attributions.

Deviant Peers Questionnaire. This instrument was designed *ad hoc* for this study. It has a total of four items with which adolescents are asked to indicate if their friends have been involved in criminal activities, show violent behavior, cut school, and/or use drugs. The response scale is 1 (none of them) to 4 (all). Higher scores indicate more frequency of relationship with deviant peer groups.

Drug Use Questionnaire. This instrument was designed *ad hoc* for this study. Adolescents were asked to indicate how often they have used different drugs (tobacco, alcohol, marijuana, hashish, cocaine, speed, ecstasy) in the last year, on a scale of 1 (never) to 5 (daily). Higher scores indicate more frequency of drug use.

Procedure and Design

First, the favorable report of the Ethics Committee of the University of Jaén (Spain) to conduct this study was obtained (Ref. CEIH 270215-1). Then, authorizations by the Public Administration in Education and the secondary schools' directors were also obtained. The secondary schools were previously selected by the Provincial Delegations of Education according to their representativeness. Eight secondary schools were invited to participate and they were given detailed information of the objectives of the research. The parents' informed consent for us to assess their children and the adolescent's informed consent were also requested. Those schools that confirmed their availability and willingness to take part in the research provided the informed consent in paper to both parents and children. Adolescents received the same information as their parents and they participated in the study once they have signed the informed consent. In the case of adolescents under 18 years, they participated in the assessment only if they had given their informed consent and that of their parents. Each participant received an identification code and no incentive was offered in exchange for participation. The questionnaires in paper were administered in a group setting in their classrooms. The evaluation time was approximately one hour. Three evaluators from the research group, who were specifically trained for this protocol, conducted the evaluations. Data collection was conducted during 2017 and 2018. The inclusion criteria were to be aged between 12 and 18 years old and to have the informed consent from parents to participate in the study. Participants under 12 years and above 18 were excluded.

This is a survey descriptive study using cross-sectional research design (Montero and León, 2007).

Data Analysis

All analyses were performed in R software. The p-value for all tests was set at 0.05. Missing values were computed by multiple imputation using the R package MICE (Buuren and Groothuis-Oudshoorn, 2011). Before factorial analysis of the data, data were screened to analyze the distributions and test statistical assumptions before analysis. To test the assumptions, a regression was created with our data and a group of random data, and the distribution of the residuals was analyzed. If there was any anomaly in the distribution of the residuals, this would be due to the distribution of our data. Confirmatory factor analysis (CFA) of the questionnaires used in the study and structural equation modeling (SEM) were performed with the lavaan R package (Rosseel, 2012). The diagonal weighted least squares (DWLS) estimator was used for CFA due to the non-normal multivariate distribution of the data. The fit indices used in CFA were Comparative Fit Index (CFI), Tucker-Lewis Index (TIF), Standardized Root Mean Square Residual (SRMS), and Root Mean Square Error of Approximation (RMSEA) with 90% of Confident interval. The latent variables that constituted the different elements in the SEM model were computed by multiplying the observed variables that comprised them. For SEM, maximum likelihood estimation with robust standard errors and the Satorra-Bentler scaled test (Maximum Likelihood Method, MLM) were used. Cronbach's alpha and McDonald ω were used to assess reliability of each subscale.

RESULTS

Of all the possible answers given by the participants on the different questionnaires, only 2.75% were missing. The multivariate normality of the data was analyzed using the Mardian test, and the results showed that the data did not have a multivariate normal distribution (Zkurtosis 811.98, $p < 0.01$). No item showed multicollinearity ($r > 0.90$) or singularity ($r > 0.95$). Data screening showed that the data did not violate the assumption of linearity, homogeneity, or homoscedasticity (the residuals of the false regression were mostly distributed between −2 and +2).

CFA of the Questionnaires

Before analyzing the proposed SEM model, the validity and reliability of the questionnaires used in the present study were calculated (see **Table 1**). To do this, a CFA of all the questionnaires was performed. The results showed that the goodness of fit determined by the CFA was between good and

TABLE 1 | Model fit parameter estimates by subscale.

Scale	χ^2	*Df*	*P*	CFI	TIF	SRMS	RMSEA	RMSEA 90% CI	
								Lower	Upper
CPV-F	80.474	73	0.257	0.996	0.995	0.066	0.008	0.000	0.017
CPV-M	84.204	73	0.174	0.995	0.994	0.057	0.010	0.000	0.018
Reasons	82.111	19	< 0.001	0.960	0.941	0.059	0.046	0.036	0.052
W-F	503.235	169	< 0.001	0.991	0.989	0.050	0.035	0.032	0.039
W-M	381.024	169	< 0.001	0.990	0.988	0.045	0.028	0.024	0.032
SIP	175.659	26	< 0.001	0.965	0.951	0.066	0.060	0.052	0.023
Deviant peers	16.456	2	< 0.001	0.975	0.925	0.040	0.067	0.040	0.099
Drugs use	16.771	9	0.052	0.988	0.980	0.140	0.023	0.000	0.040

CPV-F, Child-to-Parent Violence Questionnaire - Father; CPV-M, Child-to-Parent Violence Questionnaire - Mother; W-F, Warmth - Father; W-M, Warmth - Mother; SIP, Social Information Processing Scale.

excellent for each questionnaire (Hair et al., 2010). Below are the results for each of them:

CPV-Q-Father

The CFA showed an excellent fit ($\chi^2 73 = 80.474$, $p = 0.257$; see **Table 1** for more details), with comparative fit index (CFI) = 0.996, Tucker-Lewis index (TLI) = 0.995, standardized root mean squared residual (SRMR) = 0.066, root mean square error of approximation (RMSEA) = 0.008 (RMSEA 90% CI [0.000,0.017]), and reliability indices of $\alpha = 0.820$ and $\omega = 0.837$.

CPV-Q-Mother

The CFA showed an excellent fit ($\chi^2 73 = 84.204$, $p = 0.174$; see **Table 1** for more details), with CFI = 0.995, TLI = 0.994, SRMR = 0.057, RMSEA = 0.010 (RMSEA 90% CI [0.000,0.018]), and reliability indices of $\alpha = 0.822$ and $\omega = 0.843$.

Questionnaire on Reasons for CPV

The CFA showed a good fit ($\chi^2 19 = 82.111$, $p < 0.001$; see **Table 1** for more details), with CFI = 0.960, TLI = 0.941, SRMR = 0.059, RMSEA = 0.046 (RMSEA 90% CI [0.036,0.052]), and reliability indices of $\alpha = 0.718$ and $\omega = 0.747$ for the overall scale and $\alpha = 0.668$ and $\omega = 0.618$ for RR and $\alpha = 0.704$ and $\omega = 0.703$ for IR.

Warmth Scale-Father

The CFA showed an excellent fit ($\chi^2 169 = 503.235$, $p < 0.001$; see **Table 1** for more details), with CFI = 0.991, TLI = 0.989, SRMR = 0.050, RMSEA = 0.035 (RMSEA 90% CI [0.032,0.039]), and reliability indices of $\alpha = 0.500$ and $\omega = 0.714$ for the overall scale and $\alpha = 0.919$, $\omega = 0.920$ for the Warmth-Communication dimension, and $\alpha = 0.887$ and $\omega = 0.889$ for the Criticism-Rejection dimension.

Warmth Scale-Mother

The CFA showed an excellent fit ($\chi^2 169 = 381.024$, $p < 0.001$; see **Table 1** for more details), with CFI = 0.990, TLI = 0.988, SRMR = 0.045, RMSEA = 0.028 (RMSEA 90% CI [0.024,0.032]), and reliability indices of $\alpha = 0.417$ and $\omega = 0.634$ for the overall scale, $\alpha = 0.887$ and $\omega = 0.889$ for the Warmth-Communication dimension, and $\alpha = 0.843$ and $\omega = 0.842$ for the Criticism-Rejection dimension.

Social Information Processing in Child-to-parent Conflicts Questionnaire, Hostile Attribution and Anger Subscales

The CFA showed a good fit ($\chi^2 26 = 175.659$, $p < 0.001$; see **Table 1** for more details), with CFI = 0.965, TLI = 0.951, SRMR = 0.066, RMSEA = 0.060 (RMSEA 90% CI [0.052,0.023]), and reliability indices of $\alpha = 0.800$ and $\omega = 0.811$ for the overall scale, $\alpha = 0.720$ and $\omega = 0.712$ for hostile attribution, and $\alpha = 0.745$ and $\omega = 0.745$ for anger.

Deviant Peers Questionnaire (*ad hoc*)

The CFA showed a good fit ($\chi^2 2 = 16.456$, $p < 0.001$; see **Table 1** for more details), with CFI = 0.975, TLI = 0.925, SRMR = 0.040, RMSEA = 0.067 (RMSEA 90% CI [0.040,0.099]), and reliability indices of $\alpha = 0.647$ and $\omega = 0.648$.

Drug Use Questionnaire (*ad hoc*)

The CFA showed an excellent fit ($\chi^2 9 = 16.771$, $p = 0.052$; see **Table 1** for more details), with CFI = 0.988, TLI = 0.980, SRMR = 0.140, RMSEA = 0.023 (RMSEA 90% CI [0.000,0.040]), and reliability indices of $\alpha = 0.721$ and $\omega = 0.665$.

Structural Model Approach

The conceptual model proposed to understand the relationships between the factors involved in perceived parental warmth and reactive and instrumental CPV is presented in **Figure 1**. This model will be applied to CPV toward fathers and mothers. The results of the SEM analysis showed an excellent fit for the model applied to fathers ($\chi^2 21 = 179.814$, $p < 0.001$, CFI = 0.965, TLI = 0.908, SRMR = 0.065, RMSEA = 0.069 (RMSEA 90% CI [0.061,0.077]). Akaike's information criterion (AIC) = 37,207.645, and the Bayesian information criterion (BIC) = 37,444.266. The SEM analysis also showed an excellent fit for the model applied to mothers ($\chi^2 21 = 247.525$, $p < 0.001$, CFI = 0.951, TLI = 0.873, SRMR = 0.073, RMSEA = 0.082 (RMSEA 90% CI [0.074,0.090]), with AIC = 37,182.305 and BIC = 37,418.927. **Tables 2**, **3** show in detail the results of the SEM analysis for each of the models. **Figure 2** represents the results of the analysis of the models proposed in the case of fathers (**Figure 2A**) and in the case of mothers (**Figure 2B**). In both models all the relationships (except between warmth-mother and

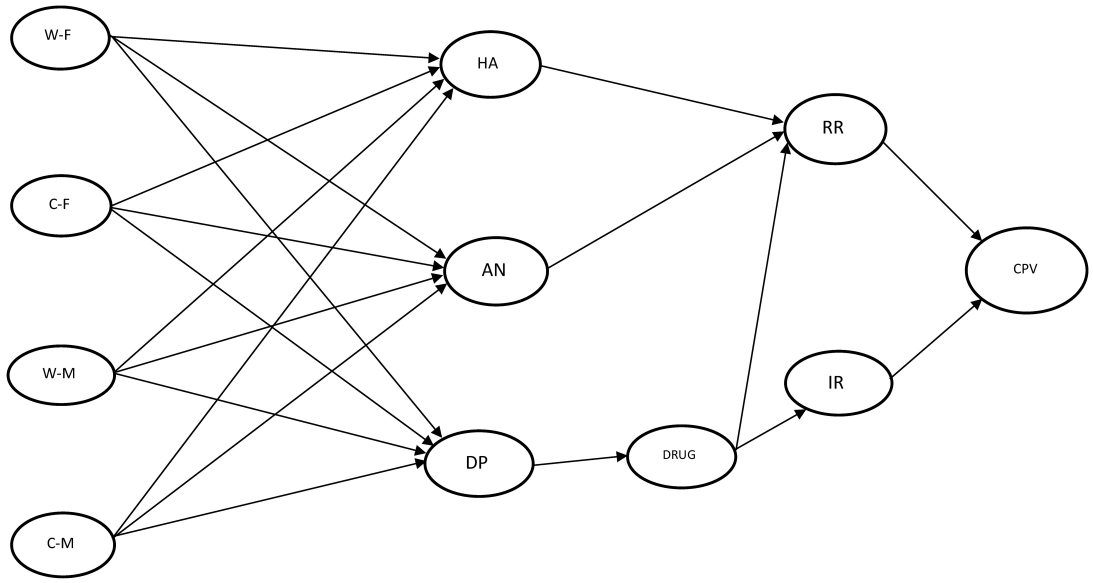

FIGURE 1 | SEM theoretical model for Child-to-Parent Violence (CPV). The circles represent the latent variables, and the arrows indicate the regression between variables. W-F, Warmth-Father; C-F, Criticism-Father; W-M, Warmth-Mother; C-M, Criticism-Mother; HA, Hostile Attribution; AN, Anger; DP, Deviant Peers; RR, Reactive Reasons; IR, Instrumental Reasons.

anger) were significant. Both models (Father and Mother) show similar factor loadings between the relationships of the different components of the model.

DISCUSSION

The objective of this study was to further investigate the relationship between perceived parental warmth and CPV. More specifically, it looked into the role of cognitive (hostile attribution), emotional (anger), and social variables (deviant peer group and drug use) in the relationship between perceived parental warmth-communication and criticism-rejection and CPV motivated by reactive and instrumental reasons.

Hypothesis 1 holds that perceived parental warmth-communication is negatively correlated with hostile attribution, anger and a deviant peer group, while perceived parental criticism-rejection is positively correlated with these variables. According to IPAR theory, individuals who perceive parental rejection, manifested by both coldness or lack of affection and hostility of the parents toward the child, are likely to develop various problems, including hostility and anger. Our results partially confirm this hypothesis. Indeed, perceived paternal and maternal warmth were negatively correlated with hostile attribution, and perceived paternal warmth was negatively correlated with anger, but in the case of the mother, this last relationship was not significant. In the case of the criticism-rejection dimension, the results were as expected, except for perceived paternal criticism and anger and perceived maternal criticism and hostile attribution, whose relationship was contrary to the expected. In general, the results agree with various studies that have found a relationship between perceived parental rejection and psychological maladjustment of children in the form of problems of hostility and emotional regulation, among others (Khaleque and Rohner, 2002, 2012; Khaleque, 2013, 2015). However, it is true that some results are unexpected, so this aspect needs to be replicated and further analyze the differences between fathers and mothers. The strongest relationship we observed was between perceived maternal criticism and child anger. This finding agrees with the review conducted by Khaleque (2017), who found that perceived maternal hostility/aggression showed a stronger relationship with psychological maladjustment of children than perceived paternal hostility/aggression. The reason for this result is not clear. A possible explanation is that children spend more time and have stronger relationships with mothers than with fathers. Further research is needed to clarify and explain this result (Khaleque, 2017).

The perceived parental warmth dimension has also been correlated with externalizing problems through the role of the deviant peer group and drug use. In this sense, our data indicate, in line with our expectations, that while perceived paternal and maternal warmth are negatively correlated with having a deviant peer group, perceived paternal and maternal criticism-rejection are positively correlated with having a deviant peer group. Trudeau et al. (2012) also found that lack of parental affection, among other parenting behaviors, predicted violent and aggressive behavior in children through deviant peer association. With respect to perceived parental criticism-rejection, the data are in line with the data of Van Ryzin and Dishion (2013), who found that family coercive interactions led to coercive relationships with peers and thus to violent behavior.

Hypothesis 2 proposed that hostile attribution and anger would be positively correlated with CPV motivated by reactive reasons. The results confirmed this hypothesis in the case

TABLE 2 | Regression factors from structural equation modeling for father.

Father	Estimate	SE	*Z*	*p*	Std. Estimate
Anger					
W-M	−0.038	0.028	−1.376	0.169	−0.039
C-M	2.573	0.588	4.373	< 0.001	2.623
W-F	−0.067	0.027	−2.455	0.014	−0.067
C-F	−0.532	0.085	−6.273	< 0.001	−0.549
HA					
W-M	−0.291	0.033	−8.910	< 0.001	−0.289
C-M	−0.755	0.267	−2.826	0.005	−0.761
W-F	−0.228	0.031	−7.444	< 0.001	−0.227
C-F	1.441	0.157	9.191	< 0.001	1.471
Deviant peers					
W-M	−0.115	0.025	−4.633	< 0.001	−0.115
C-M	0.085	0.029	2.903	0.004	0.086
W-F	−0.143	0.024	−5.927	< 0.001	−0.144
C-F	0.086	0.030	2.888	0.004	0.089
RR					
Anger	0.384	0.026	14.782	< 0.001	0.384
HA	0.592	0.056	10.589	< 0.001	0.598
Drug use	0.194	0.028	7.047	< 0.001	0.195
Drug use					
Deviant Peers	0.847	0.080	10.561	< 0.001	0.846
IR					
Drug use	0.207	0.028	7.415	< 0.001	0.204
CPV-F					
IR	0.986	0.080	12.387	< 0.001	0.341
RR	1.439	0.082	17.572	< 0.001	0.488

W-M, Warmth-Mother; C-M, Criticism-Mother; W-F, Warmth-Father; C-F, Criticism-Father; HA, Hostile Attribution; RR, Reactive Reasons; IR, Instrumental Reasons; CPV-F, Child-to-Parent Violence-Father.

TABLE 3 | Regression factors from structural equation modeling for mother.

Mother	Estimate	SE	*Z*	*p*	Std. Estimate
Anger					
W-M	−0.038	0.028	−1.388	0.165	−0.039
C-M	3.059	0.637	4.800	< 0.001	3.149
W-F	−0.067	0.027	−2.490	0.013	−0.067
C-F	−0.399	0.068	−5.862	< 0.001	−0.410
HA					
W-M	−0.291	0.033	−8.934	< 0.001	−0.288
C-M	−0.929	0.296	−3.144	0.002	−0.942
W-F	−0.228	0.031	−7.458	< 0.001	−0.226
C-F	1.194	0.129	9.265	< 0.001	1.209
Deviant peers					
W-M	−0.115	0.025	−4.642	< 0.001	−0.115
C-M	0.072	0.031	2.349	0.019	0.074
W-F	−0.143	0.024	−5.942	< 0.001	−0.144
C-F	0.088	0.029	3.069	0.002	0.090
RR					
Anger	0.388	0.027	14.266	< 0.001	0.388
HA	0.584	0.051	11.540	< 0.001	0.593
Drug use	0.194	0.028	6.899	< 0.001	0.195
Drug use					
Deviant Peers	0.847	0.079	10.766	< 0.001	0.847
IR					
Drug use	0.207	0.029	7.205	< 0.001	0.202
CPV-M					
IR	1.105	0.075	14.658	< 0.001	0.409
RR	1.474	0.077	19.159	< 0.001	0.531

W-M, Warmth-Mother; C-M, Criticism-Mother; W-F, Warmth-Father; C-F, Criticism-Father; HA, Hostile Attribution; RR, Reactive Reasons; IR, Instrumental Reasons; CPV-M, Child-to-Parent Violence-Mother.

of both fathers and mothers. Regarding hostile attribution, different studies on this variable have indicated its importance in the development of CPV (Calvete et al., 2015; Contreras and Cano-Lozano, 2015; Rosado et al., 2017), and this variable is linked to general reactive violence (Orobio de Castro et al., 2002; Arsenio et al., 2009), which is consistent with our results. Anger also predicts this type of aggression toward parents (Calvete et al., 2015; Orue et al., 2019; Simmons et al., 2020). In addition, the literature on general violent behavior has indicated that this variable is specifically linked to reactive violence (Poulin and Boivin, 2000). Our study provides additional evidence on this topic, since anger was positively correlated with CPV toward the father and toward the mother motivated by reactive reasons, which is consistent with the study by Contreras et al. (2020). Therefore, although some studies have previously analyzed hostile attribution and anger in the context of CPV, our data further delve into the relationship between these variables and this type of family violence, showing its specific relationship with reactive CPV toward both fathers and mothers.

Hypothesis 3 held that a deviant peer group would be positively correlated with drug use, which in turn would be positively linked to CPV motivated by both reactive and instrumental reasons. The analyses confirmed this hypothesis in its entirety both in the case of CPV toward the father and in the case of CPV toward the mother. On the one hand, different studies have revealed a close relationship between a deviant peer group and drug use during adolescence (e.g., Fergusson et al., 2002; Duan et al., 2009; Kendler et al., 2014), and in fact, a deviant peer group predicts drug use in adolescents with CPV (Del Hoyo-Bilbao et al., 2020), so our data agree with these studies. On the other hand, numerous studies have found that drug use is positively associated with violent behaviors of adolescents toward their parents (e.g., Calvete et al., 2011; Ibabe et al., 2013; Beckman et al., 2017; Rico et al., 2017; Rosado et al., 2017; Armstrong et al., 2018).

As mentioned above, the relationship between drug use and the onset of violent behavior is complex. Drug use by adolescents can be a source of conflict between parents and children, and in fact, a significant percentage of adolescents who assault their parents are under the influence of drugs during the aggression (Contreras and Cano-Lozano, 2015). The effect produced by substance use may favor in adolescents the disinhibition that characterizes reactive violence and that, as indicated by Pagani et al. (2009), in confrontations with parents, would increase the likelihood of aggression toward them. Regarding the relationship between drug use and instrumental violence, our results are consistent with previous studies on

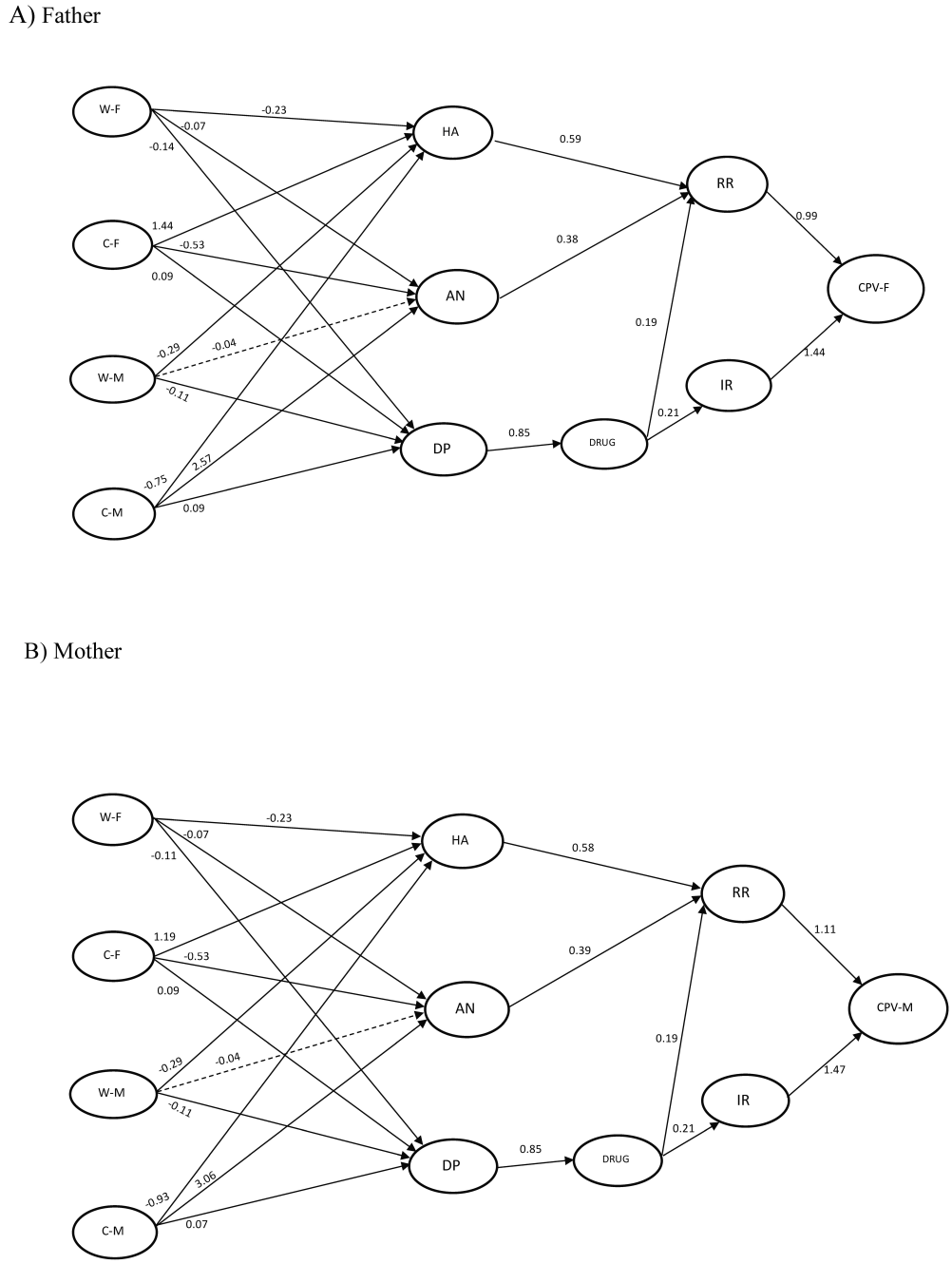

FIGURE 2 | Results of the structural equation models. The circles represent the latent variables, and the arrows indicate the regression between variables. The solid arrows represent significant relationships whereas the dotted arrows indicate non-significant relationships. The numbers indicate the standardized value of the factor load of each variable in the model. W-M, Warmth-Mother; C-M, Criticism-Mother; W-F, Warmth-Father; C-F, Criticism-Father; HA, Hostile Attribution; AN, Anger; DP, Deviant Peers; RR, Reactive Reasons; IR, Instrumental Reasons; CPV-F, Child-to-Parent Violence-Father; CPV-M, Child-to-Parent Violence-Mother. The model for fathers is presented in the upper panel **A**, and the model for mothers is presented on the panel **B**.

the subject, which also point to an instrumental use of violence against parents; for example, getting more money from parents is one of the reasons for CPV (Calvete and Orue, 2016; Contreras et al., 2019, 2020). Research on the relationship between a deviant peer group and drug use in the field of CPV has been practically null. Only the work of Del Hoyo-Bilbao et al. (2020) found an indirect effect of the deviant peer group on CPV through drug use, which is in line with our results. In this regard, as suggested by Simmons et al. (2018), it is not clear if peer groups promote CPV behaviors or

violence in general or simply support the antisocial lifestyles that adolescents who abuse their parents typically show.

In short, the results of this study confirm the relevant role of various cognitive, emotional, and social variables in the relationship between perceived parental warmth and CPV. Although previous studies have noted the importance of the perceived parental warmth dimension in CPV (Gámez-Guadix et al., 2012; Ibabe et al., 2013; Contreras and Cano-Lozano, 2014; Calvete et al., 2015; Beckman et al., 2017; Zhang et al., 2019), the present study indicates the complexity of this parental dimension in the explanation of CPV and the need to further investigate the mechanisms involved in this relationship.

In conclusion, the lack of perceived parental warmth has important repercussions in the form of psychological maladjustment of children, generating cognitive and emotional problems, which in turn lead to CPV motivated by reactive reasons. Perceived parental criticism-rejection is also correlated with a greater likelihood of association with deviant peer groups, which is associated with drug use and, in turn, with CPV motivated by both reactive and instrumental reasons.

It is necessary to keep in mind the limitations of this study to properly interpret its results. Because it was a cross-sectional study, causal relationships cannot be established between the analyzed variables. The data came from self-reports of the children and therefore refer to the perception they have of their parents. Incorporating joint reports from parents and children would provide us with a more dynamic and complete view of the subject. The relationship between parents and children is interactive and the bidirectional effects cannot be identified in cross-sectional studies. An aggressive adolescent at home causes stress and suffering to parents. In this situation, parents are likely to become more critical and hostile and less warm toward their children. In turn, this can lead to more aggressive behaviors from the adolescent toward their parents, which creates a vicious cycle of family interactions (Gault-Sherman, 2012). Moreover, the data correspond to a sample of Spanish adolescents from the community population, which should be taken into account in the generalization of the data. Future studies could replicate the results with other types of samples. It is also important that future studies analyze the differences between boys and girls in the proposed model as well as to include an analysis of other variables that may mediate or moderate the relationship between parental practices and CPV.

The results of the present study may have important implications in professional practice. Prevention and intervention programs for CPV should consider working with parents on parental practices that incorporate parental warmth as a fundamental element of the psychological adjustment of their children. At the same time, it is important to work with children on dysfunctional aspects of their cognitive and emotional functioning. In turn, it is important to also incorporate into this type of program an analysis of the social context and, more specifically, the possible negative influence of the peer group and of drug use, which can facilitate or intensify violent behaviors toward parents. Although the research on CPV programs is very scare, there are some specific prevention and intervention programs on CPV (e.g., González-Álvarez et al., 2013; Coogan and Lauster, 2015; Ibabe et al., 2018) that include anger control, quality of relationships, drug abuse prevention, etc. Consequently, the findings of the present study are in line with these CPV programs that incorporates the intervention on cognitive, emotional and social variables. Lastly, it is important to keep in mind the different motivations that this type of violence can have. The therapeutic approach depends on whether the violence is reactive in nature or of instrumental use.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Committee of the University of Jaén (Spain) (Ref. CEIH 270215-1). Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

MC-L and LC: conceptualization and methodolgy. SL: validation, formal anaysis, and data curation. MC-L, SL, and LC: writing—original draft preparation; MC-L, FR-D and LC: writing—review, editing and funding adquisition; MC-L: project administration.

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Predictive Psychosocial Factors of Child-to-Parent Violence in a Sample of Mexican Adolescents

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The aim of this study was to carry out a psychosocial analysis of child-to-parent violence (CPV) in a sample of school adolescents, considering a set of individual variables (psychological distress, problematic use of social networking sites, and perceived non-conformist social reputation) and family variables (open and problematic communication with parents) according to sex. The sample consisted of 3,731 adolescents (54% boys), aged between 14 and 16 years (M = 14.6 years, SD = 0.567), from the state of Nuevo León, Mexico. The scores of the boys and girls were analyzed to check for differences. Also, correlations between all the study variables were calculated. Finally, a multiple stepwise regression analysis was carried out for the total sample and also for boys and girls separately. Results confirmed the important role of individual variables as predictors of CPV in boys and girls. The main difference between boys and girls was observed in the predictive weight of problematic use of social networking sites, which was higher in girls than in boys. Open communication with the father was a significant factor for predicting the decrease of CPV levels in the case of boys, while open communication with the mother predicted the decrease of CPV in girls. Problematic communication with the mother showed similar values in boys and girls when predicting CPV, however, the predictive weight of problematic communication with the father was higher in girls than in boys. These results are interesting and have important implications for the prevention of CPV.

Keywords: problematic use of social networking sites, family communication, psychological distress, perceived non-conformist social reputation, child-to-parent violence

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INTRODUCTION

Child-to-parent violence (hereinafter "CPV") is defined as any repeated harmful act (physical, psychological, or economic) carried out by children against their parents or any other figure occupying their role of authority, with the main and ultimate objective of gaining power and/or control over them, also achieving different specific objectives (material or otherwise) during the process (Llamazares et al., 2013; Holt, 2016).

In terms of the prevalence of this problem in adolescents, data available in scientific literature are extremely disparate due to the different definition and measurement criteria used when analyzing this problem (Holt, 2016). The rates registered in different countries show percentages

between 45 and 95% in the case of verbal violence and between 4.6 and 22% in the case of physical assault perpetrated at least once a year (Condry and Miles, 2014; Lyons et al., 2015; Calvete and Orue, 2016; Suárez-Relinque et al., 2019). Regarding economic CPV, few studies have reported data on this type of violence but the available information indicates percentages of prevalence ranging between 29 and 60% for damage to property and at 15.8% in the case of stealing (Condry and Miles, 2014; Margolin and Baucom, 2014; Rico et al., 2017; Arias-Rivera and Hidalgo, 2020; Contreras et al., 2020). Considering data by country, prevalence of physical CPV (PCPV) in the United States and Canada ranges between 11 and 22%, while verbal CPV (VCPV) ranges between 51 and 75% (Pagani et al., 2009; Margolin and Baucom, 2014). In Spain, the prevalence of PCPV is approximately 8%, while for VCPV the prevalence rate is around 90% (Calvete et al., 2015a,b). In the specific case of Mexican adolescents, prevalences of around 80% have been observed for verbal violence and 7% for physical violence (Calvete and Veytia, 2018; Cancino-Padilla et al., 2020). Finally, regarding the age range of the aggressor, this may be established at between 4 and 24 years, although most cases occur in middle adolescence (14–17 years), progressively decreasing as age increases (Ibabe and Bentler, 2016; Simmons et al., 2018).

Regarding the main predictive factors of CPV, scientific literature has identified different dimensions at individual level that reveal a direct relationship with CPV. In this sense, depressive symptoms have been regularly described (Castañeda et al., 2012; Calvete et al., 2013a; Ibabe et al., 2014), as well as problems related to the consumption of alcohol and other drugs (Calvete et al., 2011, 2015b; Ibabe and Jaureguizar, 2011), alexithymia (Martínez-Ferrer et al., 2018a), a low level of empathy (Ibabe and Jaureguizar, 2011), narcissism (Calvete et al., 2015b), and low self-esteem (Ibabe and Jaureguizar, 2011; Loinaz et al., 2017). Interestingly, prior research has identified another set of individual dimensions that have also been shown to be important in the field of violence between peers, but which, having received little attention in the specific field of CPV, do not allow conclusions to be drawn regarding their role in this problem. Examples include psychological distress (PD), problematic use of social networking sites (PUSNSs), and perceived non-conformist social reputation (PNCSR), dimensions that have been analyzed mainly in the field of violence between peers. In relation to this, it is also important to highlight the link that some researchers point between peer violence and CPV. For example, a recent study by Carrascosa et al. (2018) compared violent behaviors toward peers in adolescents committing CPV and adolescents without CPV problems. The results of this study showed that the minor offenders committing CPV exert more violence toward their peers than adolescents without problems of CPV. Considering this observed relationship between both types of violence, it may be worthwhile to investigate whether the dimensions with demonstrated importance in violence between peers play a similar role in CPV.

PD is defined as psychological suffering expressed through symptoms of anxiety and depression, from mild to severe, with a variable degree of deterioration in the behavioral, cognitive, or emotional dimensions of functioning (Castro et al., 2019). Few studies have used this dimension in the field of violence in adolescence, although some interesting research can be found on violence between peers, albeit reporting contradictory results. Specifically, some studies describe that aggressors display higher levels of PD (anxiety and stress) than levels commonly found in adolescents (Carlson and Corcoran, 2001; Sánchez-Sosa et al., 2010; Romero et al., 2019), while others report no significant differences in aggressors with respect to ordinary adolescents (Brendgen et al., 2004; Estévez et al., 2005). As regards the relationship between PD and CPV, few studies have addressed this issue. For example, Kennedy et al. (2010) found that adolescents who were violent toward their parents had experienced greater PD than those who had not suffered from that problem. Also, Lozano et al. (2013) analyzed the link between CPV and PD, finding a positive correlation between both variables. Calvete et al. (2014a) explored the characteristics of CPV in Spain based on the speech of parent-abuse offenders, their parents, and the professionals in this area. The results of their study pointed to emotional stress in children as a relevant predictor of CPV.

The PUSNSs can be defined as the prolonged and compulsive use of social networks that undermines other social activities, studies, work, interpersonal relationships, and the psychological health and well-being of the subject (Andreassen and Pallesen, 2014). This problem generally affects populations that are vulnerable due to their age, such as adolescents (Pallanti et al., 2006; Puerta-Cortés and Carbonell, 2014). Recent research includes many studies that have analyzed the relationship between the aforementioned variable and violence between peers (Martínez-Ferrer and Moreno-Ruiz, 2017; Martínez-Ferrer et al., 2018b), cyberbullying (Giménez et al., 2015), and cybervictimization (Blanco, 2014; Martín et al., 2016). However, as far as the literature reviewed is concerned, very little information is available about the association between PUSNS and CPV. One of the few studies to provide data in this regard is the one conducted by Martínez-Ferrer et al. (2018a), who described a positive correlation between both variables, observing that high levels of CPV corresponded to high PUSNS levels.

In the case of PNCSR, as with the variables mentioned above, their study has been limited almost exclusively to the field of school violence (Buelga et al., 2012; Estévez et al., 2014). PNCSR can be more specifically defined as the adolescent's perception of his or her own social image as an image based on a continual transgression of established social rules and a defiance of formal institutions (Estévez et al., 2008; Moreno et al., 2012). This dimension is positively related to adolescents' perception of their social reputation. In other words, the more challenging, harsh, and rebellious adolescents perceive themselves, the more favorable their perception of their own social reputation will be. In this sense, non-conformist self-perception is a risk factor for the adolescent's participation in violent behavior, which is understood as a form of transgression that allows the individual to achieve social recognition (Estévez et al., 2014; Buelga et al., 2015; Romero et al., 2019). So far, few studies in the field of CPV have included this variable in their

analysis, but the available results point in the same direction as those observed in the school context, indicating a positive relationship between CPV and PNCSR. For example, Del Moral et al. (2019) found that adolescents who display the highest levels of PNCSR are, in turn, the ones who present the highest levels of violence against their parents. Also, in the study developed by Terceño (2017), adolescents from families with high levels of CPV scored higher in PNCSR than those who came from families with medium and low level of CPV.

On the other hand, in terms of family environment, different risk factors related to the onset of CPV in adolescence have also been identified in previous research. For example, lack of emotional support from parents (Ibabe et al., 2013; Calvete et al., 2014b, 2015b; Suárez-Relinque et al., 2019), low family cohesion, or high levels of conflict (Jaureguizar et al., 2013; Ibabe and Bentler, 2016; Zuñeda et al., 2016). Likewise, recent research has reported that parental socialization styles in which the lack of emotional support from parents and problems in communication with children coexist, facilitate the onset of CPV during adolescence (Calvete et al., 2013a, 2015b; Ibabe and Bentler, 2016; Simmons et al., 2018). This is the case with so-called authoritarian and neglectful parental styles. In contrast, parental styles characterized by open communication between parents and children and high levels of emotional support (indulgent and authoritative styles) have been identified as the most protective against CPV (Beckmann et al., 2017; Garaigordobil, 2017; García et al., 2018; Suárez-Relinque et al., 2019).

In short, different studies in recent years have analyzed and verified the importance of emotional support and positive communication between parents and children as protective factors against CPV in adolescence. Nevertheless, one clarification should be made regarding the information available in the above-mentioned research with respect to family communication (FC) and its relationship with CPV. Firstly, previous CPV studies have analyzed FC mostly as an aspect integrated in the study of parental socialization practices (Calvete et al., 2015b; Beckmann et al., 2017; García et al., 2018). In this sense, FC has been explored and defined as the more or less habitual use that parents make of dialog and reasoning when transmitting their decisions to their children. Thus, the reviewed studies highlighted the preventive value of those styles in which emotional support is used together with dialog and reasoning when transmitting parental practices. However, there is a lack of information regarding the specific role played by the dimensions of FC (problematic communication and open communication) in the development of CPV in adolescence, and only few studies have addressed this goal. For example, in the study by Contreras and Cano-Lozano (2014a), it is observed that parent-abuse offenders reported having less openness and higher levels of problematic communication with parents (especially with the mother) than the other delinquent and normal adolescents. Considering the information stated here, it would be worthwhile to deepen knowledge of the relationship between these dimensions of FC and CPV.

Finally, in relation to socio-demographic factors, attention should be drawn to the importance of considering the sex variable in the study of CPV in adolescence, taking into account the differences observed in the results of previous research. In this sense, it is also important to point the disparity found in the results, mainly depending on the sample used. For example, in studies with community samples, similar rates of global CPV have been observed for boys and girls, and even higher levels in girls (Jaureguizar et al., 2013; Ibabe, 2015; Calvete and Veytia, 2018). Some studies indicate that verbal aggression is more frequent in girls, while physical aggression is more used by boys (Pagani et al., 2009; Calvete et al., 2013b; Jaureguizar et al., 2013; Calvete and Orue, 2016; Beckmann et al., 2017). However, other studies that also used community samples found no significant differences between boys and girls on the type of CPV exerted (Elliott et al., 2011; Calvete et al., 2015b; Ibabe and Bentler, 2016). In the case of judicial and clinical samples, most studies have reported higher rates of aggression in boys than in girls (Boxer et al., 2009; Walsh and Krienert, 2009; Routt and Anderson, 2011; Condry and Miles, 2014; Contreras and Cano-Lozano, 2014b; Ibabe et al., 2014; Gallego et al., 2019; Loinaz et al., 2020). According to these studies, physical aggression is more used by boys (Boxer et al., 2009; Walsh and Krienert, 2009; Routt and Anderson, 2011), although there are no significant differences between boys and girls regarding the severity of the assault (Condry and Miles, 2014; Simmons et al., 2018; Loinaz et al., 2020).

As regards the gender differences in the rest of the variables, compared to boys, girls tend to show higher of PD (Mewton et al., 2016; Van Droogenbroeck et al., 2018; Zhang et al., 2018) and PUSNS (Sarabia and Estévez, 2016; Martínez-Ferrer et al., 2018b; Aparicio et al., 2020). In contrast, higher levels have been observed in boys in the case of PNCSR (Buelga et al., 2012; Shin, 2017). In terms of FC, few studies have provided information on both the sex of the adolescent and the type of communication (open or problematic) with their parents. Furthermore, available findings present conflicting results. Even so, a review of recent literature seems to confirm the existence of significant differences according to sex. In general, boys show slightly higher levels than girls in open communication with their fathers (OCF) and girls slightly higher levels in open communication with their mothers (OCM) and problematic communication with the father (PCF) and mother (PCM; Parra and Oliva, 2002; Cava, 2003; Keijsers and Poulin, 2013).

The Present Study

Taking into account the background information presented in the previous section, this study aimed to identify predictive variables of CPV in the individual (PUSNS, PD, and PNCSR) and family (FC), according to the sex of the adolescent. To accomplish this general goal, we address four specific objectives: first, to analyze the differences in the study variables between boys and girls: second, to explore the relationships between all the study variables; third, to estimate the relative importance of PUSNS, PD, PNCSR, and FC in the prediction of CPV; and fourth, to explore sex-based differences in the relative importance of PUSNS, PD, PNCSR, and FC in the prediction of CPV.

This study aimed to deepen knowledge of the individual and family factors that explain CPV. Regarding the main predictive factors of CPV, firstly, it should be reminded that

the causes of behavioral problems in adolescence are multiple and can be found at individual and social level (Estévez et al., 2008). In previous research has been highlighted the importance of considering not only individual factors but also those linked to the social environment to which the adolescent belongs, in order to get a better understanding of violent behavior in adolescence (Estévez et al., 2008; Martínez-Ferrer et al., 2011; Jiménez and Estévez, 2017). In this sense, dimensions from the family context have been shown as specially relevant to address the study of CPV. In the present study, the role of FC dimensions is explored. It has to be pointed that, until now, FC has only been mostly analyzed in the field of CPV in its role as a transmitter of parental practices, integrated into parental socialization styles. On the other hand, the relevance of the dimensions of FC (problematic communication and open communication) has been shown in the field of violence between peers, therefore it could be interesting to analyze the importance of these dimensions in the field of CPV.

One of the most noteworthy contributions of the present study is the incorporation in the analysis of CPV of individual dimensions that have thus far been insufficiently examined by researchers. These dimensions include PUSNS, PD, and PNCSR. As with the familiar variables mentioned above, the previous research has routinely identified these variables as risk factors for violence between peers, but their importance for predicting CPV is barely known.

Finally, it is important to highlight that the choice of the variables and objectives of the present study were based not only on the gaps detected in literature but also on the link that, according to some researchers, exists between violence between peers and CPV (see Carrascosa et al., 2018). Considering this, it may be worthwhile investigating whether the dimensions with demonstrated importance in violence between peers play a similar role in CPV.

MATERIALS AND METHODS

Participants

The study involved a total of 3,731 adolescents (54% boys), aged between 14 and 16 (M = 14.6 years, SD = 0.567), from the state of Nuevo León, Mexico. Adolescents were selected from 89 educational centers located in the Nuevo León region (Mexico). Selection was performed by means of stratified random sampling that considered the geographical area and the type of ownership. 60.44% of the participants came from urban schools and 87.7% studied at public educational centers (**Table 1**). Missing data were processed using the listwise deletion procedure.

TABLE 1 | Sociodemographic variables.

Variables	Total sample	Sex	
		Boys	Girls
Age			
14	2,131 (57.1%)	1,142 (53.6%)	989 (46.4%)
15	986 (26.4%)	555 (56.3%)	431 (43.7%)
16	614 (16.4%)	316 (51.5%)	298 (48.5%)
Geographical area			
Urban	2,253 (60.4%)	1,240 (55%)	1,013 (45%)
Rural	1,478 (39.6%)	773 (52.3%)	705 (47.7%)
School ownership			
Public	3,272 (87.7%)	1746 (53.4%)	1,526 (46.6%)
Private	459 (12.3%)	267 (58.2%)	192 (41.8%)
Total	3,731 (100%)	2013 (54%)	1718 (46%)

Procedure

The selection of the educational centers, as well as the planning and development of the field work, was carried out jointly by the Autonomous Universities of Nuevo León in Mexico and Pablo de Olavide in Seville. The research team contacted the management of the selected centers to formally request their participation in the study. Once the schools' participation was confirmed, the researchers requested the voluntary collaboration of the students and the written consent of their families. The data were collected between March 2018 and May 2018. The questionnaire was administered by the researchers in the classrooms, where the adolescents usually received classes. The study took the respondents approximately 60 min to complete all the scales included in the questionnaire. During the administration of the questionnaire, the students were informed that their participation was anonymous and that they could abandon the session at any time without completing the questionnaire. Lastly, it is important to underline that this research was approved by the Ethics Committee of the Pablo de Olavide University in Seville and was carried out respecting the fundamental principles of the Declaration of Helsinki.

Materials

Instruments used in the present study have been adapted into Spanish language using the parallel back-translation method (Brislin, 1986). Also, research team collaborators in Mexico made a cultural adaptation of the scales considering the variations of the Spanish spoken in Mexico.

To measure PD, the Kessler Psychological Distress Scale K10 was used (Kessler and Mroczek, 1994; Alonso et al., 2010; Mewton et al., 2016; Castro et al., 2019). This scale was designed by Kessler and Mroczek (1994) and it is composed of 10 items (i.e., "During the last 30 days, about how often did you feel depressed?") and offers an overall score of PD. There are five response options (none of the time, a little of the time, some of the time, most of the time, and all of the time). The possible scores range between 10 and 50. Scores can be classified into four categories: "no psychological distress" (scores of 10–19), "slight psychological distress" (score of 20–24), "moderate psychological distress" (25–29), and "extreme psychological distress" (30–50). The scale has been shown to have adequate psychometric properties: [SBχ^2 = 293.4076, df = 29, $p < 0.001$, CFI = 0.979, RMSEA = 0.049 (0.044, 0.055)]. Factor loadings ranged between 0.65 and 0.77. The scale offers good internal consistency, MacDonald's omega coefficient of the scale was 0.91.

To measure PNCSR, the Reputation Enhancement Scale was used (RES; Carroll et al., 1999; Buelga et al., 2012;

Del Moral et al., 2019; Jiménez et al., 2019). The social reputation scale was originally designed by Carroll et al. (1999) to obtain information regarding the non-conformist self-perception of adolescents. This scale consists of 15 items, each with four response options (never, rarely, many times, and always) and presents three dimensions that measure the adolescents' self-perception of their social reputation: non-conformist self-perception, conformist self-perception, and self-perception of reputation. For the present study, the non-conformist self-perception dimension (items 2, 5, 6, 7, 9, 12, and 13) was used ("I would like others to think I am a rebellious child"). The CFA confirmed an adequate fit of the model to the data: [SBχ^2 = 530.3886, df = 55, $p < 0.001$, CFI = 0.930, RMSEA = 0.048 (0.044, 0.052)]. Factor loadings ranged between 0.59 and 0.82. MacDonald's omega coefficients of the scale and subscales were 0.93 (RES), 0.88 (non-conformist self-perception subscale), 0.75 (conformist self-perception subscale), and 0.75 (self-perception of reputation subscale).

To measure FC, the Parent-Adolescent Communication Scale (PACS) was used (Barnes and Olson, 1982; Jiménez et al., 2009, 2019; Cava, 2011). This instrument was developed by Barnes and Olson (1982) and consists of two sub-scales, one referring to children's communication with the mother and the other to communication with the father. Both scales contain 20 items, which are grouped into two dimensions: open communication (items 1, 2, 3, 6, 7, 8, 9, 13, 14, 16, and 17; i.e., "My mother/father tries to understand my point of view") and problematic communication, which includes items related to offensive communication (items 5, 12, 18, and 19; i.e., "My mother/father has a tendency to say things to me which would be better left unsaid") and avoidable communication (items 4, 10, 11, 15, and 20; i.e., "When we are having a problem, I often give my mother/father the silent treatment"). Fit indices of the CFA were determined as follows: [SBχ^2 = 1628.2179, df = 140, $p < 0.001$, CFI = 0.942, RMSEA = 0.053 (0.051, 0.056)]. Factor loadings ranged between 0.59 and 0.84. MacDonald's omega coefficients of the scale and subscales were 0.95 (FC scale), 0.92 (open communication subscale), and 0.88 (problematic communication subscale).

To measure PUSNS, the problematic use of SNS in adolescence scale was used (Martínez-Ferrer et al., 2018a,b). This instrument was designed by Martínez-Ferrer et al. (2018b) to measure the problematic use of social networks using a scale of 13 items (i.e., "I need to be connected to my social networks continuously"), with response options from 1 (never) to 4 (always). The CFA confirmed an adequate fit of the model to the data: [SBχ^2 = 20.8770, df = 2, $p < 0.001$, CFI = 0.990, RMSEA = 0.050 (0.032, 0.071)]. Factor loadings ranged between 0.67 and 0.80. MacDonald's omega coefficient of the scale was 0.81.

To measure CPV, the Conflict Tactics Scale (CTS2) was used (Straus and Douglas, 2004; Gámez-Guadix et al., 2012; Del Moral et al., 2019; Suárez-Relinque et al., 2019). CTS2 is an instrument designed originally by Straus et al. (1996) to measure the extent to which partners engage in verbal and physical attacks on each other. In recent years, several authors have adapted the scale to analyze the violence exerted by adolescents toward his/her parents (see Gámez-Guadix et al., 2012; Suárez-Relinque et al., 2019). In the present study, we used the adaptation developed by Gámez-Guadix et al. (2012) to measure this type of violence in adolescents. The scale offers a global index of child-to-parent violence and scores in two dimensions (verbal aggression and physical assault). Items 1–3 reflect verbal aggression (i.e., "I insult or have insulted or sworn at my parents") while items 4–6 reflect physical assault (i.e., "I slap, hit or have slapped or hit my parents"). Adolescents have to respond twice to each item (one for the mother and one for the father), taking into account the last year. The scale used by Gámez-Guadix et al. (2012) included a response scale with 7 options (0 = never to 6 = more than 20 times). In the present study, the instrument was adapted using a response scale composed by 5 points (0 = never to 4 = many times). The scale has been shown to have excellent psychometric properties: [SBχ^2 = 33.8854, df = 12, $p < 0.001$, CFI = 0.965, RMSEA = 0.022 (0.014, 0.031)]. Factor loadings ranged between 0.64 and 0.80. MacDonald's omega coefficients of the scales and subscales were: 0.88 (complete scale), 0.75 (verbal aggression subscale), and 0.82 (physical assault subscale) respectively.

Data Analysis

Statistical analysis in the present study was carried out using SPSS software (version 20.0; IBM, Armonk, NY), except the Confirmatory Factor Analysis (CFA), which was conducted using EQS 6.1. First, to evidence the validity of the study scales in the Mexican adolescent population, a CFA was performed. McDonald's omega coefficient was calculated to measure the internal consistency of the scales and subscales used in the study. Second, the scores of the boys and girls were analyzed to check for sex-based differences. For this purpose, an exploratory analysis was carried out using descriptive statistics (M and SD) and a means contrast (Student's T) for the different study variables. In the latter case, Levene's test for equality of variances was taken into account in the application of the contrast test. Also, to check the assumption of normality, the Kolmogorov-Smirnov test was used. Non-significant result was obtained from the test confirming the normal distribution of the data. Third, Pearson's correlations between all the study variables were calculated. Finally, to estimate the relative weight of predictor variables, a multiple stepwise regression analysis was carried out for the total sample and for boys and girls separately.

RESULTS

As shown in **Table 2**, girls of the study obtained higher scores in CPV, VCPV, PD, and PUSNS while boys registered higher scores in PCPV and PNCSR. Also, girls showed higher levels than boys in most dimensions of FC (OCM, PCF, and PCM), while boys obtained higher scores in the case of OCF. Results of the *T*-test pointed statistically significant differences in CPV according to sex. Significant differences between boys and girls were also observed in VCPV, PUSNS, PNCSR, PD, PCM, OCF, and PCF, but no sex-based differences were observed in PCPV

and OCM. On the other hand, considering the size of the effect, the significant differences obtained according to sex were relevant only in the case of VCPV (small effect), PUSNS (small effect), and PD (medium effect). The size of the effect showed no relevant differences between boys and girls in CPV, PNCSR, PCM, OCF, and PCF.

Pearson's correlations between all the study variables were calculated (**Table 3**). Most of the correlations were statistically significant. In the case of CPV, the highest correlations were observed with both types of violence PCPV (r = 0.723) and VCPV (r = 0.888), with PNCSR (r = 0.388) and PD (r = 0.372), and the lowest with OCM (r = −0.165) and OCF (r = −0.198). The highest correlations in the table were observed between PCF and PCM (r = 0.655) and between OCF and OCM (r = 0.649). No correlation was detected between PCF and OCF.

To estimate the relative weight of predictor variables, a stepwise regression analysis was performed considering the total sample (**Table 4**). In the first step, the PUSNS variable was included. The model obtained was significant $F(1, 3{,}729) = 438.525$, $p < 0.001$. PUSNS ($\beta = 0.324$; $p < 0.001$) explained 10.5% of the variance in CPV ($R^2 = 0.105$). In the second step, the PNCSR variable was included. PUSNS ($\beta = 0.229$; $p < 0.001$), together with PNCSR ($\beta = 0.320$; $p < 0.001$), contributed to the prediction of the model $F(2, 3{,}728) = 461.540$, $p < 0.001$, which explained 19.8% of the variance. Regarding the third step, the PD variable was included. In this case, PUSNS ($\beta = 0.147$;

TABLE 2 | Means, standard deviations, and differences (*T*-test) for the study variables according to sex.

	Sex	M	SD	Levene's test		*T*-test	d
				F	Sig.	T	
CPV	Male	1.2081	0.31402	19.213	0.000	−6.784***	−0.070
	Female	1.2784	0.31670				
PCPV	Male	1.0635	0.25896	0.427	0.513	−0.488	--
	Female	1.0675	0.24631				
VCPV	Male	1.4771	0.56121	83.486	0.000	−10.688***	−0.225
	Female	1.7017	0.70004				
PUSNS	Male	1.7214	0.59867	64.010	0.000	−11.828***	−0.258
	Female	1.9790	0.71346				
PNCSR	Male	1.4869	0.50293	4.347	0.037	4.837***	0.079
	Female	1.4079	0.49184				
PD	Male	1.8649	0.75031	72.793	0.000	−18.797***	−0.512
	Female	2.3767	0.89052				
OCM	Male	3.5256	1.06441	3.169	0.075	−1.370	--
	Female	3.5738	1.08027				
PCM	Male	1.9629	0.74408	7.497	0.006	−7.407***	−0.183
	Female	2.1455	0.75629				
OCF	Male	3.2839	1.07846	0.104	0.747	5.273***	0.187
	Female	3.0972	1.07727				
PCF	Male	1.9062	0.77136	4.243	0.039	−4.887***	−0.126
	Female	2.0320	0.79453				

*CPV, child-to-parent violence; PCPV, physical child-to-parent violence; VCPV, verbal child-to-parent violence; PUSNS, problematic use of social networking sites; PNCSR, perceived non-conformist social reputation; PD, psychological distress; OCM, open communication with the mother; PCM, problematic communication with the mother; OCF, open communication with the father; PCF, problematic communication with the father. ***p < 0.001.*

TABLE 3 | Correlations among CPV dimensions, PUSNS, PNCSR, PD, and dimensions of FC.

	CPV	PCPV	VCPV	PUSNS	PNCSR	PD	OCM	PCM	OCF	PCF
CPV	1	0.723**	0.888**	0.324**	0.388**	0.372**	−0.165**	0.323**	−0.198**	0.278**
PCPV		1	0.451**	0.144**	0.262**	0.160**	−0.125**	0.182**	−0.112**	0.165**
VCPV			1	0.365**	0.373**	0.442**	−0.157**	0.352**	−0.220**	0.315**
PUSNS				1	0.297**	0.374**	−0.115**	0.269**	−0.115**	0.176**
PNCSR					1	0.241**	−0.163**	0.277**	−0.167**	0.200**
PD						1	−0.133**	0.367**	−0.197**	0.259**
OCM							1	−0.048**	0.649**	0.083**
PCM								1	−0.038*	0.655**
OCF									1	−0.025
PCF										1

*CPV, child-to-parent violence; PCPV, physical child-to-parent violence; VCPV, verbal child-to parent violence; PUSNS, problematic use of social networking sites; PNCSR, perceived non-conformist social reputation; PD, psychological distress; OCM, open communication with the mother; PCM, problematic communication with the mother; OCF, open communication with the father; PCF, problematic communication with the father. **Correlation is significant at the 0.01 level (bilateral).*
**Correlation is significant at the 0.05 level (bilateral).*

TABLE 4 | Stepwise linear regression analysis (total sample).

Variables	B	Standard error	Beta	*p*	R^2
Step 1					0.105
PUSNS	0.154	0.007	0.324	0.000***	
Step 2					0.198
PUSNS	0.109	0.007	0.229	0.000***	
PNCSR	0.203	0.010	0.320	0.000***	
Step 3					0.251
PUSNS	0.070	0.007	0.147	0.000***	
PNCSR	0.181	0.010	0.284	0.000***	
PD	0.092	0.006	0.249	0.000***	
Step 4					0.283
PUSNS	0.061	0.007	0.129	0.000***	
PNCSR	0.154	0.010	0.242	0.000***	
PD	0.070	0.006	0.190	0.000***	
OCM	−0.014	0.006	−0.047	0.013*	
PCM	0.031	0.008	0.074	0.000***	
OCF	−0.020	0.005	−0.070	0.000***	
PCF	0.045	0.008	0.112	0.000***	

*CPV, child-to-parent violence; PUSNS, problematic use of social networking sites; PNCSR, perceived non-conformist social reputation; PD, psychological distress; OCM, open communication with the mother; PCM, problematic communication with the mother; OCF, open communication with the father; PCF, problematic communication with the father. *p < 0.05; ***p < 0.001.*

TABLE 5 | Stepwise linear regression analysis (male subsample).

Variables	B	Standard error	Beta	*p*	R^2
Step 1					0.065
PUSNS	0.134	0.011	0.255	0.000***	
Step 2					0.155
PUSNS	0.086	0.011	0.164	0.000***	
PNCSR	0.196	0.013	0.313	0.000***	
Step 3					0.194
PUSNS	0.059	0.011	0.112	0.000***	
PNCSR	0.174	0.013	0.279	0.000***	
PD	0.088	0.009	0.210	0.000***	
Step 4					0.221
PUSNS	0.051	0.011	0.097	0.000***	
PNCSR	0.149	0.013	0.238	0.000***	
PD	0.073	0.009	0.173	0.000***	
OCM	−0.011	0.008	−0.038	0.169	
PCM	0.032	0.012	0.077	0.009**	
OCF	−0.029	0.008	−0.098	0.000***	
PCF	0.029	0.012	0.072	0.013*	

*CPV, child-to-parent violence; PUSNS, problematic use of social networking sites; PNCSR, perceived non-conformist social reputation; PD, psychological distress; OCM, open communication with the mother; PCM, problematic communication with the mother; OCF, open communication with the father; PCF, problematic communication with the father. *p < 0.05; **p < 0.01; ***p < 0.001.*

$p < 0.001$) and PNCSR ($\beta = 0.284$; $p < 0.001$), together with PD ($\beta = 0.249$; $p < 0.001$), contributed to the prediction of the model $F(3, 3{,}727) = 415.538$, $p < 0.001$, which explained 25.1% of the variance. Finally, in the fourth step, the dimensions of FC were included. In this last step it was observed that PUSNS ($\beta = 0.129$; $p < 0.001$), PNCSR ($\beta = 0.242$; $p < 0.001$), and PD ($\beta = 0.190$; $p < 0.001$), together with OCM ($\beta = -0.047$; $p < 0.05$), PCM ($\beta = 0.074$; $p < 0.001$), OCF ($\beta = -0.070$; $p < 0.001$), and PCF ($\beta = 0.112$; $p < 0.001$) contributed to the prediction of the model $F(7, 3{,}723) = 209.746$, $p < 0.001$, which explained 28.3% of the variance of CPV.

In order to explore the differences in the predictive weight of the variables according to sex, a multiple stepwise regression analysis was carried out separately for boys (**Table 5**) and girls (**Table 6**).

Stepwise Regression (Boys)

In the first step, the PUSNS variable was included. The model obtained was significant $F(1, 2011) = 139.552$, $p < 0.001$. PUSNS ($\beta = 0.255$; $p < 0.001$) explained 6.5% of the variance in CPV ($R^2 = 0.065$). In the second step, the PNCSR variable was included. PUSNS ($\beta = 0.164$; $p < 0.001$), together with PNCSR ($\beta = 0.313$; $p < 0.001$), contributed to the prediction of the model $F(2, 2010) = 184.355$, $p < 0.001$, which explained 15.5% of the variance. Regarding the third step, the PD variable was included. In this case, PUSNS ($\beta = 0.112$; $p < 0.001$) and PNCSR ($\beta = 0.279$; $p < 0.001$), together with PD ($\beta = 0.210$; $p < 0.001$), contributed to the prediction of the model $F(3, 2009) = 161.486$, $p < 0.001$, which explained 19.4% of the variance. Finally, in the fourth step, the dimensions of FC were included. In this last step it was observed that PUSNS ($\beta = 0.097$; $p < 0.001$), PNCSR ($\beta = 0.238$; $p < 0.001$), and PD ($\beta = 0.173$; $p < 0.001$), together with PCM ($\beta = 0.077$; $p < 0.01$), OCF ($\beta = -0.098$; $p < 0.001$), and PCF ($\beta = 0.072$; $p < 0.05$), contributed to the prediction of the model $F(7, 2005) = 81.123$, $p < 0.001$, which explained 22.1% of the variance of CPV.

TABLE 6 | Stepwise linear regression analysis (female subsample).

Variables	B	Standard error	Beta	*p*	R^2
Step 1					0.135
PUSNS	0.163	0.010	0.368	0.000***	
Step 2					0.250
PUSNS	0.106	0.010	0.239	0.000***	
PNCSR	0.234	0.014	0.363	0.000***	
Step 3					0.300
PUSNS	0.074	0.010	0.166	0.000***	
PNCSR	0.199	0.014	0.309	0.000***	
PD	0.087	0.008	0.246	0.000***	
Step 4					0.344
PUSNS	0.065	0.010	0.147	0.000***	
PNCSR	0.169	0.014	0.263	0.000***	
PD	0.060	0.008	0.168	0.000***	
OCM	−0.017	0.008	−0.059	0.025*	
PCM	0.034	0.011	0.081	0.002**	
OCF	−0.006	0.008	−0.021	0.409	
PCF	0.064	0.010	0.161	0.000***	

*CPV, child-to-parent violence; PUSNS, problematic use of social networking sites; PNCSR, perceived non-conformist social reputation; PD, psychological distress; OCM, open communication with the mother; PCM, problematic communication with the mother; OCF, open communication with the father; PCF, problematic communication with the father. *p < 0.05; **p < 0.01; ***p < 0.001.*

Stepwise Regression (Girls)

In the first step, the PUSNS variable was included. The model obtained was significant $F(1, 1716) = 268.052$, $p < 0.001$. PUSNS

(β = 0.368; $p < 0.001$) explained 13.5% of the variance in CPV (R2 = 0.135). In the second step, the PNCSR variable was included. PUSNS (β = 0.239; $p < 0.001$), together with PNCSR (β = 0.363; $p < 0.001$), contributed to the prediction of the model $F(2, 1715) = 286.170$, $p < 0.001$, which explained 25% of the variance. Regarding the third step, the PD variable was included. In this case, PUSNS (β = 0.166; $p < 0.001$) and PNCSR (β = 0.309; $p < 0.001$), together with PD (β = 0.246; $p < 0.001$), contributed to the prediction of the model $F(3, 1714) = 244.444$, $p < 0.001$, which explained 30% of the variance. Finally, in the fourth step, the dimensions of FC were included. In this last step it was observed that PUSNS (β = 0.147; $p < 0.001$), PNCSR (β = 0.263; $p < 0.001$), and PD (β = 0.168; $p < 0.001$), together with OCM (β = −0.059; $p < 0.05$), PCM (β = 0.081; $p < 0.01$), and PCF (β = 0.161; $p < 0.001$), contributed to the prediction of the model $F(7, 1710) = 128.351$, $p < 0.001$, which explained 34.4% of the variance of CPV.

DISCUSSION

The main objective of this study was to identify the predictor variables of CPV in the adolescent's individual and family environment, taking into consideration the possibility of there being differences based on sex. The results of our study confirmed the important role of PNCSR, PUSNS, PD, and FC as predictors of CPV and showed some important differences in the way these variables predict CPV depending on the sex of the adolescent.

Firstly, significant differences were observed in the scores of boys and girls in most of the study variables. In the case of CPV, girls showed a higher global index than boys. Also, girls of the study obtained higher scores in VCPV, however, no significant differences were detected between boys and girls in PCPV. These results point in the expected direction considering the sample used. In other terms, studies based on community samples have described a disparity of results that include higher levels of CPV in girls (Ibabe, 2015; Calvete and Veytia, 2018) and higher levels of verbal aggression in girls than in boys (Pagani et al., 2009; Calvete et al., 2013b; Jaureguizar et al., 2013; Calvete and Orue, 2016; Beckmann et al., 2017). Regarding this information, it is important to note that in community contexts, there is a lower presence of physical violence toward parents than of verbal violence. The difference in means of CPV in favor of girls obtained in studies that use community samples like the present study, is explained in many cases by the fact that girls obtain similar scores to boys in physical violence, but significantly higher scores on the verbal violence sub-scale (see Calvete et al., 2013b; Beckmann et al., 2017).

The results for the other variables revealed differences according to sex in the expected direction. The girls obtained higher scores in PD (Mewton et al., 2016; Van Droogenbroeck et al., 2018; Zhang et al., 2018) and PUSNS (Sarabia and Estévez, 2016; Martínez-Ferrer et al., 2018b; Aparicio et al., 2020), while higher scores were registered for boys in PNCSR (Buelga et al., 2012; Shin, 2017). In terms of FC, the girls showed higher levels in most dimensions: OCM, PCF, and PCM. In contrast, higher scores were observed in boys in the case of OCF. These findings are consistent with what is observed in recent studies (Parra and Oliva, 2002; Cava, 2003; Keijsers and Poulin, 2013). Finally, it is also important to indicate that despite sex-based differences were significant in most of the study variables, the size of these differences could be considered as relevant only in the case of VCPV, PUSNS, and PD.

Secondly, regarding the prediction analyses performed, it should be noted that all the variables included in the first model (considering the total sample) were significant predictors of CPV. As the study variables were included in the regression model, this increased the percentage of explained variance of the dependent variable. Even so, the variables that showed greater predictive importance in the set were PNCSR, PUSNS, and PD. When discussing our results, it is important to note that literature on the role of these individual variables in CPV is very scarce and the studies that have been conducted have focused mainly on the sphere of school violence (Buelga et al., 2012; Estévez et al., 2014).

In the case of PNCSR, the recent research by Del Moral et al. (2019) reported a positive correlation between PNCSR and CPV. Also, Terceño (2017) found that adolescents from families with high levels of CPV scored higher in PNCSR than those who came from families with medium and low level of CPV. In this sense, a positive correlation was also observed between both variables in the present study, together with their important predictive power. To explain these results, it is first important to consider the link established in prior research between PNCSR and violence in adolescence. Previous studies in the school context have reported that PNCSR represents a risk factor for adolescents' participation in violent behaviors (Estévez et al., 2014; Buelga et al., 2015; Romero et al., 2019). It is important to remind that adolescents' perception of their PNCSR is more favorable the more they perceive themselves as persons who defy rules and authority (Romero et al., 2019). In this sense, the main figures of authority normally confronted by adolescents in the school context are teachers, and adult parents or referents with whom they live in the family context. Taking into account the foregoing and the results of our study, PNCSR could be treated as a risk factor, not only in the school context but also in the case of CPV.

The second variable to show a greater capacity to predict CPV was PUSNS. Although a decrease in its predictive value was observed as the rest of the variables were included in the regression analysis, it proved to be one of the most relevant variables in the model. Again, little theoretical background information was found when interpreting our results. One of the few studies to present data on the relationship between PUSNS and CPV is the one by Martínez-Ferrer et al. (2018a). The aforementioned study showed that the higher the PUSNS scores, the higher the levels of CPV observed in adolescents. In this sense, our findings are consistent with those published in the aforementioned study, and PUSNS was observed to be positively correlated with adolescent violence toward parents, as well as being one of the most important predictors of the regression model. It is important to note that PUSNS has been routinely linked to violent behavior with peers. This relationship seems to be modulated, as suggested by Martínez-Ferrer et al. (2018a), by a positive attitude toward the transgression

of social norms. In this sense, in the present study PNCSR and PUSNS accounted for around 20% of the variance in CPV, which would, to a certain extent, endorse the hypothesis proposed by the aforementioned authors for CPV; hence, the need to continue investigating the relationship between social reputation, the problematic use of social networks and the different forms of violence in adolescence.

The results obtained in the present study also showed how the model significantly increases its capacity to predict CPV when PD is included. In other words, according to the results obtained here, experiencing symptoms of anxiety and depression in adolescence increases the likelihood of assaulting parents or authority figures in the family. Previous literature has confirmed the relationship between PD and violence in adolescence, mainly in the field of peers. Although results vary, some researchers have reported higher levels of PD in adolescents who attack their peers compared to ordinary adolescents (Carlson and Corcoran, 2001; Sánchez-Sosa et al., 2010). As regards the study of the relationship between PD and CPV, very few studies have examined this aspect in literature. Nevertheless, in the research conducted by Lozano et al. (2013), a positive correlation was observed between both variables. Kennedy et al. (2010) found that adolescents who were violent toward their parents had experienced greater PD than those who were not. Also, results from the qualitative study carried out by Calvete et al. (2014a) pointed to emotional stress in children as a relevant predictor of CPV. Our results would be in line with those described in the abovementioned studies. According to our research, higher PD levels would coincide with higher CPV scores, and PD could be considered an important variable when predicting violence against parents in adolescence. Although our results are interesting and relevant, there is still little evidence in scientific literature regarding the role of PD in CPV to draw clear conclusions, and future research will need to study this relationship in greater depth.

The present study also analyzed the role of FC in CPV. Here, problematic communication significantly predicted the observed increases in CPV, especially in the case of the father, while the open communication predicted the decrease in CPV levels. Therefore, these results suggest that problematic communication, namely the form characterized by humiliating comments, threats, blame, insults, and screaming, is a risk factor for the development of CPV in adolescence, whereas open communication, characterized by spontaneity, listening and acceptance, is a protective factor. This result goes in the direction of what was obtained by Contreras and Cano-Lozano (2014a). Notwithstanding the foregoing, it is important to note that with the exception of the research developed by Contreras and Cano-Lozano (2014a), most of previous studies have analyzed the role of FC as an integral aspect of the study of parental socialization practices (Beckmann et al., 2017; García et al., 2018). In other words, there is a lack of information in scientific literature regarding the specific role played by the dimensions of FC (problematic and open communication) in the development of CPV in adolescence. We therefore believe that our results are interesting and make a relevant contribution to the study of CPV.

Finally, regarding sex-based differences, relevant information was obtained from the results of the multiple stepwise regression analysis carried out for boys and girls separately. First, we observed that the predictive capacity of the regression model was higher in girls than in boys. The analysis also confirmed the important role of individual variables (PNCSR, PUSNS, and PD) as predictors of CPV in boys and girls. PNCSR and PD showed similar values in both models and the main difference between girls and boys was observed regarding the predictive weight of PUSNS, significantly higher in girls than in boys. This last result goes in the direction of what it is shown in the study developed by Martínez-Ferrer et al. (2018a), and points to PUSNS as being a risk factor for CPV especially relevant for girls.

On the other hand, some important differences were detected in the results of boys and girls with respect to FC dimensions. Regarding open communication, OCF shows as a significant factor for predicting the decrease of CPV levels for boys, but not for girls. Conversely, OCM predicted the decrease of CPV for the girls of the study, but not for the boys. These results should be underlined as they provide relevant information for prevention strategies, namely that OCF and OCM should not be considered as protective factors without taking into account the sex of the adolescent.

In the case of problematic communication, PCM and PCF contributed significantly to predict CPV in boys and girls. However, while similar values were obtained in the case of PCM in both boys and girls (slightly higher in girls), the predictive weight of PCF was significantly higher in girls than in boys. In order to interpret this result, we should consider several aspects contrasted in the relevant literature. First, girls show higher levels of FC than boys and are more sensitive to family conflicts (Romero-Abrio et al., 2019). Second, the differential socialization of boys and girls in the family and its relationship with CPV must be taken into account (Cortina and Martin, 2020). For example, conflicts related to personal autonomy and independence are common during adolescence, especially in the case of girls who suffer more than boys from family restrictions that limit their freedom of conduct (Alonso-Stuyck and Aliaga, 2017). These kinds of conflicts tend to be solved in many cases unilaterally through parental imposition (López-Martínez et al., 2019). These considerations offer the beginnings of a possible explanation for why girls show higher levels than boys in PCF and PCM, and also for why girls are more affected in terms of CPV than boys through problematic communication with both parents (mainly with the father, who represents the prime authority figure). In other terms, the hypothesis could be that girls are more involved in family conflicts than boys due to the sex-based differences in socialization; girls are also more sensitive to family conflicts and show higher levels of FC than boys. Consequently, girls not only suffer more discomfort and frustration but also generate more arguments and engage in more violence (mainly verbal) toward parents than boys (López-Martínez et al., 2019; Cortina and Martin, 2020).

Summing up, the results of the present study confirm the role of PNCSR, PUSNS, PD, and FC as predictors of CPV and show some important differences in the way this set of

variables predict CPV depending on the gender of the adolescent. First, PNCSR and PD showed similar values in boys and girls. Second, the main difference between boys and girls was observed in the predictive weight of PUSNS, which was higher in girls than in boys. Third, OCM appears as a preventive factor against CPV in the case of girls, while OCF does in boys. Fourth, although the two dimensions of problematic communication (PCM and PCF) could be considered as risk factors for boys and girls, the present research shows that both, but especially PCF, have a greater impact on girls.

These results have important implications for prevention: they reveal variables at both individual and family levels (the latter in the case of problematic communication) that can be risk factors for the development of CPV in adolescence. The results further point to the importance of open communication as a protective factor, to the importance of taking the sex of the adolescent into consideration, and lastly, to the role of communication with the mother, and with the father separately, when designing preventive strategies.

Finally, as pointed out earlier, there is no available information in recent research regarding the specific role played by problematic communication and open communication with the mother and the father in the development of CPV in adolescence. The findings and conclusions of our work clearly need further research.

One of the most relevant contributions of this study is the information provided in relation to variables that have been analyzed mainly in the sphere of violence between peers, but which have scarcely been studied in connection with CPV. This study provides information that reinforces the idea endorsed by some researchers (see Carrascosa et al., 2018), regarding the existence of a link between violence between peers and CPV. We verified that the individual and family dimensions with confirmed importance in violence between peers seem to play a similar role in CPV. We also consider that this idea of a general aggressor responding violently in different areas of his/her life due to the same variables is an exciting contribution that should be an important topic for future studies.

Nevertheless, this study had certain limitations that need to be highlighted. For example, according to our results, being a girl would imply a greater likelihood of engaging in violent behavior toward parents. This result is consistent with the findings reported in prior literature but should be interpreted with caution. Studies with large population samples such as ours have reported a greater presence of verbal violence (more common in girls), which may have an impact on the higher overall rate of CPV in the case of women. Therefore, the higher probability observed in girls could partly be explained by the type of sample chosen. Second, not only the overall CPV index but also the differences observed in the dependent variable (CPV) as a function of sex could have been explained with greater precision if the specific type of violence had been considered. Also, all the participants in the sample were selected in the age range corresponding to middle adolescence, as this is the stage in which most CPV cases are recorded. Nevertheless, we believe that the information provided here could be enriched through an analysis of the potential differences according to the specific stage of adolescence (early, middle, and late) in each individual. Lastly, it is worthwhile mentioning that this was a cross-sectional study in which causal relationships could not be established.

However, despite the abovementioned limitations, this study provides interesting and relevant information that should be considered in the field of prevention and for the development of future research.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee of the Pablo de Olavide University in Seville. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

CS-R: conceptualization and writing—original draft preparation. CS-R, GM, and JC: methodology. CS-R and JC: software. CS-R and GM: formal analysis and funding acquisition. CS-R, GM, TJ, and JS: investigation. CS-R, GM, and TJ: writing—review and editing. GM, TJ, JC, and JS: supervision. All authors contributed to the article and approved the submitted version.

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Adolescent-to-Parent Violence: Psychological and Family Adjustment

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Adolescent-to-Parent Violence (APV) or Child-to-Parent Violence (CPV) is a specific form of violence that has remained inconspicuous until recently, but is becoming a mounting social issue and is increasingly the focus of scientific research. Of the variables related to APV, the study assessed the characteristics of the family system and its relationship to the psychosocial adjustment of adolescents, an aspect scarcely examined in the literature. Thus, a field study was performed on a community sample of 210 adolescents aged 12–17 years (51.4% girls) who were assessed on measurements of APV, parenting (parental socialization), victimization, and psychological adjustment (personal, family, and school). The results revealed higher rates of psychological APV, and no gender effects in violence exercised against either parent. The adolescents involved in APV exhibited a greater psychological maladjustment in the different areas under analysis. Moreover, adolescents engaging in psychological APV reported a parental socialization style characterized by severe strictness and supervision in comparison to non-aggressors not implicated in psychological APV. Finally, adolescents exercising APV who were victimized by their parents showed more psychological, personal, and school maladjustment. These results have implications for needs analysis and the planning of community prevention strategies.

Keywords: adolescent-to-parent violence, parenting style, family system, maladjustment, victimization, childcare

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INTRODUCTION

Antisocial behavior is a key issue in the field of Legal and Forensic Psychology (Arce et al., 2011). One of its expressions is adolescent-to-parent violence (APV, also known as child-to parent violence), a specific form of violence that has remained inconspicuous for decades (Ibabe, 2019), but was brought into the limelight in recent years owing to the rise in the number of cases and the severe impact on the entire family system (Holt, 2016; Del Hoyo-Bilbao et al., 2020). Owing to the social and legal involvements involved, the international scientific community is gradually shifting its focus toward this phenomenon but the number of specific APV studies still remains scarce (Gámez-Guadix and Calvete, 2012; Lyons et al., 2015). A recent systematic review (Simmons et al., 2018) has highlighted that the variations in the samples employed in previous studies and the plurality of definitions and measurements accounted for the discrepancies reported in the scientific literature (Gallego et al., 2019; Cortina and Martín, 2020; Loinaz and de Sousa, 2020).

According to the definition of APV, the data available on world prevalence rates revealed variations ranging from 5 to 21% for physical violence and higher rates of 33–93%

for psychological violence (Simmons et al., 2018). In Spain, most field studies have estimated prevalence rates of 21% for physical violence (Ibabe et al., 2013; Calvete et al., 2014; Ibabe and Bentler, 2016), and rates of 33–93% for psychological and emotional violence (Calvete et al., 2013; Ibabe, 2015; Ibabe and Bentler, 2016; Cortina and Martín, 2020). This high variability suggests the existence of moderators underlying the relationship. Thus, prevalence rates depend on the sample employed, with boys vastly outnumbering girls in judicial samples (Armstrong et al., 2018) by around 59–87% (Simmons et al., 2018), whereas in normalized student or community samples, gender differences almost vanished (Loinaz et al., 2020). In relation to the type, violence, physical, or psychological, most of the studies on community and student samples found no significant gender differences in APV (Loinaz et al., 2020), whereas other studies reported girls exercised more psychological violence (Calvete et al., 2013; Rosado et al., 2017). In clinical and judicial samples, physical violence was mainly exercised by boys (Armstrong et al., 2018; Cortina and Martín, 2020), owing to the seriousness of the APV offense, this entailed a higher probability of custodial sentences, whereas girls were mainly involved in psychological violence. Nevertheless, other studies have found that girls in custody can also resort to severe forms of APV involving physical violence (Condry and Miles, 2014; Simmons et al., 2018).

Regarding the victims, several studies have shown mothers are more often the target of APV than fathers (Edenborough et al., 2008; Condry and Miles, 2014; Lyons et al., 2015) whilst other studies have found no significant differences between either parent (Loinaz et al., 2020), particularly in long-term violence (Calvete et al., 2013). Gender differences have also been related to types of violence, physical or psychological, with most physical violence being exercised by boys (Simmons et al., 2019), whereas mothers tend to be the target of psychological violence (Ibabe and Jaureguizar, 2010).

Family variables have gradually became the focus of research (Loinaz et al., 2018; Beckmann, 2020; Del Hoyo-Bilbao et al., 2020). Parenting styles have been linked to APV (Maccoby and Martin, 1983), in particular with authoritarian parenting styles in community and judicial samples, and a permissive parenting style in community, clinical, and offender samples (Simmons et al., 2018). Whereas parenting style is a key factor in the child's evolutionary process, during adolescence, it is crucial as it decisively influences attitudes and behavior (Cutrín et al., 2018). Research on the impact of different socialization styles has identified several factors linked to an adolescent's adaptation. Whereas a democratic style predicted greater psychosocial development, self-esteem, and academic achievement (Ibabe, 2015), an authoritarian, permissive, or neglectful style had negative outcomes for adolescents such as somatic symptoms, emotional stress, and antisocial and/or deviant behavior (Lamborn et al., 1991; Contreras and Cano, 2014; Ibabe, 2015; Suárez-Relinque et al., 2019). The influence of parenting styles on antisocial behavior have identified poor supervision and discipline as a crucial risk factor for this type of behavior in adolescence (Perez-Gramaje et al., 2020). The parents of APV adolescents were reluctant to impose discipline when children misbehaved, and showed lower levels of affect and support (Gámez-Guadix et al., 2012; Ibabe et al., 2013; Calvete et al., 2015). Recent studies support the relevance of affection and attachment in family relations (Beckmann et al., 2017; Curtis et al., 2019; Suárez-Relinque et al., 2019) with girls and boys who failed to receive affection adopting inappropriate problem-solving strategies, including APV (Gámez-Guadix et al., 2012; Cortina and Martín, 2020), whilst boys and girls exposed to coercive parental behavior appear to be at an increased risk of developing behavioral problems (Pasalich et al., 2011). Complementarily, several empirical studies have shown that affective warmth, emotional nurturance, and support giving were protective factors against the risk of violent behavior in children and adolescents (Jiménez-García et al., 2019; Suárez-Relinque et al., 2019; Cortina and Martín, 2020).

Furthermore, numerous studies on direct and vicarious victimization in childhood as a precipitator of APV have underscored the hypothesis of bidirectionality, i.e., parents-to-child violence predict child-to-parent violence (Routt and Anderson, 2011; Contreras and Cano, 2016; Del Hoyo-Bilbao et al., 2020). In a recent meta-analysis, Gallego et al. (2019) concluded that the probability of developing APV among adolescents victimized by their parents was 71% higher than in non-victimized adolescents under different conditions (community or judicial population, type of violence: physical or psychological, and type of victimization: direct or vicarious). Though bidirectionality has been well established, the same cannot be said of the adjustment in each of the significant areas of adolescents engaged in APV who were victimized by their parents (Haw, 2010; Novo et al., 2019; Contreras et al., 2020).

Thus, the aims of this study on the family system of adolescents engaged in APV were threefold: (1) to evaluate the personal and school psychological adjustment of adolescents involved in APV; (2) to assess parenting (parental socialization styles) as informed by the self-reports of APV and non-APV adolescents; and (3) to compare psychosocial adjustment in victimized adolescents and victimized adolescents who also engaged in APV.

MATERIALS AND METHODS

Participants

A total of 210 adolescents, age range 12–17 years (M = 13.21, SD = 0.94), from secondary schools in Galicia (Spain), participated in this study. The sample was balanced in terms of gender (107 girls, 51.4%) $\chi^2(1) = 0.08$, *ns*. As for the family structure informed by the participants, 79% were intact families and 17.7% were modifications to the original family unit, the main reasons were parental separation or divorce (14.8%), work (1.9%), or death (0.9%). In relation to schooling, 13% were first, 20% were second, and 67% were third-year Compulsory Secondary Education students.

Measurement Instruments

For measuring APV, the Conflict Tactics Scale: Parent-Child Version (CTS-PC) (Straus and Fauchier, 2007) was administered. The instrument consists of six items, three for measuring physical

violence (e.g., I slapped or punched my father/mother) and three for psychological violence (e.g., I shouted at my mother/father), answered on a three-point Likert response scale from *never* (0) to *often* (2) referring to the last year. The CTS-PC is an adapted version of the CTSCP scale but the directionality of the behavior has been modified. The response format is in line with the original scale, taking as a reference period the previous year. The reliability (Cronbach's alpha) of the scale was 0.63 for mothers and 0.59 for fathers.

The adjustment of the adolescents was evaluated using the Spanish adaptation of the Children and Adolescents Behavior Evaluation System (González et al., 2004) S3 self-report. This instrument evaluates several aspects of behavior and personality, including both positive (adaptive) and negative (clinical) dimensions. The questionnaire comprises 14 scales grouped into clinical and adaptive scales. Moreover, it includes an F Index (measuring the negative tendency to respond negatively to adolescent behavior) an L Index (tendency for the adolescent to respond too positively), a Response Consistency Index, and a Response Pattern Index. As for the reliability of the scales, internal consistency was estimated to range from 0.70 to 0.90.

The Parental Socialization Scale in Adolescence ESPA-29 (Escala de Socialización Parental en la Adolescencia ESPA-29; Musitu and García, 2001) was employed to assess parental socialization styles. This scale evaluates parental socialization styles in different representative scenarios. Children evaluate their father and mother separately in 29 situations. As for the procedure, 13 of the 29 situations are evaluated with the affect and indifference subscales. The remaining 16 situations are evaluated by the dialogue subscale ("speak to me"), neglect subscale ("s/he doesn't care"), psychological strictness subscale ("s/he tells me off"), physical strictness subscale ("s/he hits me"), and privation subscale ("I'm not allowed something"). Each scale has a 4-point scoring format (1, *never*; 2, *sometimes*; 3, *often*; and 4, *always*). The score for the Acceptance/Involvement dimension is obtained from the dialogue, affect, and neglect subscales, whereas the score of the Strictness/Supervision dimension was calculated as the mean of the mean scores of the strictness, psychological strictness, and privation subscales. Internal consistency (Cronbach's alpha) was of 0.97 for the Acceptance/Involvement dimension, and of 0.96 for Strictness/Supervision.

For measuring victimization, the Parent-Child Conflict Tactics Scales (CTSPC) (Straus et al., 1998) was administered. This scale consists of six items measuring the frequency to which children suffer physical and/or psychological abuse from their parents, with a three-point response format: 0 (*never*), 1 (*sometimes*), and 2 (*often*). Each item is responded twice, one referring to the mother and the other, the father. In the present study, the internal consistency of the scale was an α of 0.83 for the father and an α of 0.78 for the mother.

Procedure and Design

A filed study with a community sample was designed to quantify the prevalence of APV, the deviation from normativity of child-to parent offenders in personal and school psychological adjustment; the mean comparison between offenders and non-offenders in parental socialization styles; the association between parent-to child violence and child-to parent violence; and the effects of parent-to child victimization in the psychological, personal, and school and adjustment.

A community sample was gathered by accidental sampling from public schools in Galicia (northwest of Spain). In all schools, informed consent was obtained from the parents and tutors of the adolescents prior to inclusion in the study.

Participants were administered the questionnaires in two sessions in small groups in their usual classrooms. Participants were assured their data would remain anonymous and confidential in accordance with the Spanish data protection law (Ley Orgánica 3/2018 de Protección de Datos Personales y Garantía de los Derechos Digitales).

Data Analysis

Contingency tables were used to summarize the categorical variables, and the chi-square test was ran to analyze statistical differences. For the continuous variables, the comparison of the means between groups was performed using the Student's *t*-test for independent samples. The magnitude of the effect sizes was interpreted in terms of the Probability of Superiority of the Effect Size (PSES; Monteiro et al., 2018), a quantitative estimate of the effect-size i.e., probability of the superiority of the observed effect size in relation to all possible.

The identification of cases of adolescents who had exercised APV was in accordance with the "Zero tolerance" criterion enshrined in law and the directives of internationally recognized institutions and bodies such as the European Parliament Resolution on Zero Tolerance (Recommendation A4-0250/97, Resolution 2017/2897). In order to apply this criterion, participants were classified according to the CTS-PC Scale responses into individuals who had committed APV (raw score ≥ 1) vs. those who had not (raw score = 0).

RESULTS

Frequency

The analysis of the frequency of APV according to typology (i.e., psychological or physical), and the parent's gender revealed that psychological violence was employed both toward the mother (108 adolescents, 51.4%) and the father (109 adolescents, 51.9%), whereas the frequency of physical violence was 1.9% (4) for both parents. The results showed no gender differences between girls and boys in physical and psychological violence toward either parent, father, and mother alike (see **Tables 1**, **2**).

Personal and School Psychological Adjustment

Thereafter, the psychological, personal, and school adjustment of adolescents engaged in growing violence in different significant spheres and/or areas was analyzed. Thus, the variable (APV vs. no APV) was recoded according to the "Zero tolerance" criterion

TABLE 1 | Independent-samples *t*-test on type of violence against parent for the factor aggressor's gender (boy vs. girl).

Variable	*t*	*p*	M_M	SD_M	M_F	SD_F	*d*(PS_{ES})
APV physical father	0.44	0.792	0.48	1.01	0.39	1.14	0.08 (0.040)
APV psychological father	0.35	0.806	1.32	1.37	1.25	1.48	0.00 (0.000)
APV total father	0.57	0.942	1.68	1.94	1.51	2.21	0.08 (0.040)

df(128); M_M, mean of the boys' group in APV; SD_M, standard deviation of the boys' group; M_F, mean of the girls' group in APV; SD_F, standard deviation of the girls' group; d, Cohen's; PS_{ES}, Probability of Superiority of the Effect Size.

TABLE 2 | Independent-samples *t*-test on type of violence against the mother for the factor aggressor's gender (boy vs. girl).

Variable	*t*	*p*	M_M	SD_M	M_F	SD_F	*d*(PS_{ES})
APV physical mother	−0.53	0.416	0.08	0.55	0.01	0.10	0.18 (0.103)
APV psychological mother	−0.58	0.085	1.23	1.36	1.36	1.64	0.09 (0.048)
APV total mother	−0.67	0.168	1.38	1.95	1.58	2.19	0.10 (0.056)

df(128); M_M, mean of the boys' group in APV; SD_M, standard deviation of the boys' group; M_F, mean of the girls' group in APV; SD_F, standard deviation of the girls' group; d, Cohen's; PS_{ES}, Probability of Superiority of the Effect Size.

TABLE 3 | One sample *t*-tests of psychological APV toward mother on BASC dimensions.

Variables	*t*	M_{APV}	SD_{APV}	M_{tv}	*d*(PS_{ES})
Psychological adjustment					
Atypicality	2.59**	5.45	7.01	3.7	0.32 (0.182)
Locus of control	1.58	4.06	3.04	3.6	0.16 (0.088)
Somatization	3.55***	1.71	2.09	1.0	0.41 (0.228)
Social stress	2.09*	3.36	3.27	2.7	0.22 (0.128)
Anxiety	3.07**	8.37	2.27	7.4	0.34 (0.190)
Depression	3.52***	2.91	3.25	1.8	0.39 (0.220)
Sense of inadequacy	4.05***	4.60	3.33	3.3	0.43 (0.332)
Personal adjustment					
Interpersonal relations	−2.15*	13.99	2.92	14.6	−0.24 (0.136)
Relations with parents	−0.99	7.58	2.19	7.8	−0.11 (0.088)
Self-esteem	−2.87**	5.89	2.51	6.6	−0.31 (0.174)
Self-confident	0.834	8.52	2.36	6.8	0.90 (0.632)
School adjustment					
Negative school Attitude	4.23***	3.11	2.94	1.9	0.45 (0.252)
Negative attitude teachers	4.46***	3.76	2.68	2.6	0.47 (0.362)
Sensation seeking	1.77	5.25	3.11	4.7	0.18 (0.104)
GLOBAL INDEXES					
Clinical maladjustment	2.67**	211.26	43.37	200	0.30 (0.583)
Personal adjustment	−2.76**	189.23	41.01	200.3	−0.31 (0.587)
School maladjustment	3.49***	154.31	31.01	143.8	0.38 (0.606)
Emotional symptoms	2.69**	316.50	64.83	0.30	0.31 (0.583)

*df(107); M_{APV}, mean of the APV group; SD_{APV}, standard deviation of the APV group; M_{tv}, test value (mean of the normative sample); d, Cohen's d; PS_{ES}, Probability of Superiority of the Effect Size. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.*

(see section "Data Analysis"), with a total of 109 adolescents (51.9%) self-reporting growing psychological violence toward the father and 108 (51.4%) toward the mother. In relation to physical APV, four adolescents (1.9%) informed of violence toward the father and/or mother.

After recoding the psychological violence variable, the scores obtained by participants on the BASC scales were contrasted with the test value, i.e., the mean of the normative sample being obtained from the scoring manual of the instrument (González et al., 2004; **Table 3**).

As shown in **Table 3**, in relation to psychological adjustment, adolescents engaged in psychological APV toward the mother scored significantly higher than the normative population in *Atypicality, Somatization, Social stress, Anxiety, Depression,* and *Sense of inadequacy,* as well as on the global *Clinical maladjustment* index, with greater maladjustment in all of the scales assessed. As for personal adjustment, significant differences were found in the *Interpersonal relations, and Self-esteem* scales and their global indexes, with low adjustment values for adolescents exercising growing violence. As for the

school area, the results were significant in the *Negative attitude toward teachers, Negative attitude toward school* scales, and global *School Maladjustment* index, revealing APV adolescents exhibited more hostile resentment or dissatisfaction toward school and teachers as compared to the normative population. The probability of superiority of the effect sizes for the statistical significance results (see **Table 3**) ranged from 36.2% (Negative attitudes toward teachers) to 12.8% (Social stress) i.e., the magnitude of the effect size is greater than 34.8–12.8% of all possibilities.

Adolescents involved in psychological APV toward the father showed a significantly higher psychological maladjustment as compared to the normative population on the *Atypicality, Somatization, Social stress, Anxiety, Depression, Sense of inadequacy* scales, and global index of *Clinical maladjustment.* As for the area of Personal adjustment, *Self-esteem* and *Interpersonal relations*, and the global index of *Personal adjustment* revealed significant differences, with adolescents engaged in growing violence showing a lower self-esteem and higher personal maladjustment. In terms of school, APV adolescents scored significantly higher on the *Negative attitude toward teachers, Negative attitude toward school* scales, and *School maladjustment* index, with more hostile thoughts and a generalized rebuff toward the school, teachers, and structure of education. The magnitude of the statistically significant effect sizes (see **Table 4**) ranged from 34.8% (Negative attitudes toward teachers) to 12.8% (Social stress) i.e., the magnitude of the effect size is greater than 34.8–12.8% of all possibilities.

Parental Socialization Styles

The results showed that adolescents engaging in psychological APV toward the mother (see **Table 5**) informed of a parental socialization style characterized by little *Affect* and much *Indifference*, in comparison to a non-aggressor not engaging in psychological APV. The global dimensions of *Acceptance/Involvement and Strictness/Supervision* were significant, with *Acceptance/Involvement* being lower in APV adolescents as compared to non-aggressors; and higher on the *Strictness/Supervision* scale. The effect sizes of each of the global dimensions were small. In relation to the father, only the *Strictness/Supervision* dimension was statistically significant, with higher scores in adolescents involved in growing violence, than in non-aggressors. Nevertheless, the magnitude of the probability of superiority of the effect was small: 19.6% for affect, 19.8% for indifference; 19.0% for acceptance/involvement, and 17.4% for strictness/supervision.

Experience of Child Victimization

APV and victimization variables were recorded in line with the previously mentioned "Zero tolerance" criterion to create only one variable, "adolescents engaged in APV," with values 0 (absence of APV) and 1 (presence of APV). The results of this classification showed that 121 participants (57.6%) reported an instance of violent behavior toward parents in the last year vs. 73

TABLE 4 | One sample *t*-tests of psychological APV adolescents toward father on BASC dimensions.

Variables	*t*	M_{APV}	SD_{APV}	M_{tv}	*d*(PS_{ES})
Psychological adjustment					
Atypicality	2.72**	5.50	6.91	3.7	0.33 (0.182)
Locus of control	1.60	4.05	2.95	3.6	0.00 (0.000)
Somatization	3.32***	1.62	1.96	1.0	0.37 (0.206)
Social stress	2.02*	3.34	3.30	2.7	0.22 (0.128)
Anxiety	2.88**	8.28	3.19	7.4	0.27 (0.150)
Depression	3.56***	2.95	3.36	1.8	0.39 (0.304)
Sense of inadequacy	4.67***	4.78	3.30	3.3	0.49 (0.376)
Personal adjustment					
Interpersonal relations	−2.75**	13.81	2.96	14.6	−0.30 (0.236)
Relations with parents	−1.28	7.52	2.20	7.8	−0.15 (0.080)
Self-esteem	−2.93**	5.87	2.54	6.6	−0.32 (0.182)
Self-confidence	0.767	8.37	2.28	6.8	0.85 (0.452)
School adjustment					
Negative attitude school	4.51***	3.10	2.76	1.9	0.46 (0.258)
Negative attitude teachers	4.70***	3.75	2.56	2.6	0.45 (0.348)
Sensation seeking	1.32	5.10	3.15	4.7	0.13 (0.072)
Global indexes					
Clinical maladjustment	2.58*	210.32	41.58	200.0	0.29 (0.228)
Personal adjustment	3.16*	187.33	42.55	200.3	−0.36 (0.282)
School maladjustment	3.50***	153.80	29.70	143.8	0.38 (0.296)
Emotional symptoms	2.88**	317.7	65.83	299.5	0.32 (0.296)

*df(108); M_{APV}, mean of the APV group; SD_{APV}, standard deviation of the APV group; M_{tv}, test value (mean of the normative sample); d, Cohen's d; PS_{ES}, Probability of Superiority of the Effect Size. ***p < 0.001, **p < 0.01, *p < 0.05.*

TABLE 5 | Independent-samples *t*-test on parenting (parental socialization styles) for the factor psychological APV.

Variables	*t*	M_{APV}	SD_{APV}	M_{n-APV}	SD_{n-APV}	$d(PS_{ES})$
Mother (*n* = 173)						
Dialogue	0.41	2.98	0.76	3.03	0.84	−0.06 (0.032)
Affect	2.28*	3.06	0.72	3.30	0.66	−0.35 (0.196)
Neglect	1.85	1.26	0.40	1.15	0.33	0.30 (0.166)
Indifference	2.36*	1.64	0.75	1.39	0.62	0.36 (0.198)
Physical coercion	−1.75	1.13	0.48	1.03	0.30	0.25 (0.142)
Privation	−1.03	1.97	0.66	1.86	0.75	0.16 (0.088)
Psychological coercion	−1.90	2.71	0.65	2.50	0.75	0.30 (0.166)
Acceptance/Involvement	2.23*	3.26	0.47	3.42	0.46	−0.34 (0.190)
Strictness/Supervision	−1.98*	1.94	0.43	1.80	0.49	0.31 (0.174)
Father (*n* = 167)						
Dialogue	0.57	2.81	0.79	2.87	0.78	−0.08 (0.048)
Affect	0.89	2.99	0.71	3.08	0.69	−0.13 (0.072)
Neglect	−1.58	1.29	0.40	1.20	0.34	0.24 (0.136)
Indifference	−1.28	1.57	0.56	1.46	0.60	0.19 (0.104)
Physical coercion	−1.80	1.13	0.33	1.04	0.32	0.28 (0.158)
Privation	−1.36	1.91	0.623	1.78	0.66	0.20 (0.112)
Psychological coercion	−1.22	2.55	0.66	2.43	0.61	0.19 (0.104)
Acceptance/Involvement	1.22	3.23	0.46	3.31	0.44	−0.18 (0.104)
Strictness/Supervision	−2.21*	1.88	0.43	1.74	0.40	0.34 (0.190)

*df(171/165); M_{APV}, mean of APV adolescent group; SD_{APV}, standard deviation of APV adolescent group; $M_{non-APV}$, mean of non-aggressor adolescent group; SD_{n-APV}, standard deviation of non-aggressor adolescent group; d, Cohen's d; PS_{ES}, Probability of Superiority of the Effect Size. *p < 0.05.*

(34.7%) who had not and 16 (7.6%), non-respondents. The same procedure was employed to quantify parent-to-child violence of participants to obtain only one variable of "victimization," with only two values 0 (absence of victimization) vs. 1 (presence of victimization). A total of 174 adolescents (82.8%) reported an instance victimization, vs. 23 (10.9%) adolescents reporting no victimization, and 13 (6.1%) non-respondents. The results showed victimization was significantly associated to child-to-parent violence, $\chi^2(1, N = 174) = 34.78$, $p < 0.001$, that is, a relationship between being victimized by parents and being violent toward them, with a large effect size of $\varphi = 0.426$ ($PS_{ES} = 0.541$, i.e., the effect is greater than 54.1% of all possible effects).

The results (see **Table 6**) revealed that victimized APV adolescents showed a higher *maladjustment* in the global indexes (*Clinical maladjustment*, higher *School maladjustment*, and lower *Personal adjustment*) with moderate magnitude effects sizes. Moreover, most of the scales in each of the areas under analysis were significant (except *Anxiety, Interpersonal relations, and Negative attitude toward school and teachers*), which indicated a greater *maladjustment* in victimized APV adolescents with a probability of superiority of the effect size from 39.8% (Personal adjustment) to 22.8% (Somatization).

DISCUSSION

In this study on a community sample, APV was highly prevalent both toward the mother (51.4%) and father (51.9%), with negligible physical violence (1.9%), which agreed with the findings of previous studies (Gámez-Guadix and Calvete, 2012; Ibabe et al., 2013; Aroca-Montolío et al., 2014; Calvete et al., 2015). Contrary to previous studies reporting higher rates of violence against mothers than fathers (Condry and Miles, 2014; Holt, 2016; Simmons et al., 2018), the results did not show differences between mothers and fathers for either the gender of the child or for the type of violence. Regarding this finding, some authors have proposed a link between the victim's gender and gender roles (Cottrell and Monk, 2004; Gallagher, 2004; Cortina and Martín, 2020). Thus, it is possible that the incorporation of women to the labor market, along with a dynamic flexible family model (Buehler, 2020), may contribute to a parity between mothers and fathers as victims (Williams et al., 2017). Furthermore, the blurring of gender roles in adolescents in comparison to traditional gender roles of the past may also play a key role.

As for the characteristics of adolescents involved in APV, no significant gender differences were observed. In general, there is no consensus in the literature regarding differences between boys and girls in exercising APV (Moulds and Day, 2017), with some studies reporting males perpetrate more violence than females (Ibabe et al., 2014; Calvete et al., 2015; Kuay et al., 2016), whereas others studies found no genders differences (Calvete et al., 2014; Margolin and Baucom, 2014; Bartle-Haring et al., 2015). The lack of consensus is associated to the type of samples employed, judicial or normalized. In this sense, the result of the present study corroborated the findings of previous studies in community samples where gender differences were blurred (Loinaz et al., 2020). Likewise, in the analysis of other types of violence related to adolescence, a number of studies have found no differences between boys and girls (Marcos et al., 2020), and

TABLE 6 | Independent-samples *t*-test on the BASC dimensions for the factor victimization.

Variables	*t*	M_{APV}	SD_{APV}	M_{n-APV}	SD_{n-APV}	*d*(PS_{ES})
Adjustment psychological						
Atypicality	−2.53*	4.87	3.53	3.08	3.18	0.51 (0.282)
Locus of control	−2.13*	3.98	2.78	2.82	2.35	0.45 (0.252)
Somatization	−2.27*	1.75	2.13	1.06	1.25	0.40 (0.228)
Social stress	−2.13*	3.26	3.16	1.91	2.79	0.45 (0.348)
Anxiety	−1.24	8.29	3.36	7.44	3.27	0.26 (0.142)
Depression	−2.43*	3.06	3.52	1.53	2.86	0.48 (0.266)
Sense of inadequacy	−2.60*	4.82	3.09	3.20	2.88	0.54 (0.296)
Personal adjustment						
Interpersonal relations	0.98	14.00	2.56	14.50	2.07	−0.21 (0.120)
Relations with parents	3.39***	7.31	2.09	8.44	0.96	−0.69 (0.376)
Self-esteem	2.63**	5.85	2.59	6.97	1.80	−0.50 (0.274)
Self-confidence	2.09*	6.36	1.41	6.94	1.15	−0.45 (0.252)
School adjustment						
Negative attitude school	−1.39	3.44	2.87	2.62	2.56	0.30 (0.166)
Negative attitude teachers	−1.45	4.09	2.68	3.27	2.76	0.32 (0.182)
Sensation seeking	−2.23*	5.28	3.39	3.79	2.84	0.48 (0.266)
Global indexes						
Clinical maladjustment	−2.67**	212.5	38.88	195.2	28.21	0.51 (0.282)
Personal adjustment	2.87**	181.1	40.9	206.8	27.71	−0.74 (0.398)
School maladjustment	−2.02*	158.8	27.4	147.2	26.68	0.43 (0.236)
Emotional symptoms	−2.46*	322.4	58.9	293.0	48.83	0.54 (0.304)

*df(107); M_{APV}, mean victimized child-parental violence adolescent group; SD_{APV}, standard deviation victimized child-parental violence adolescent group; M_{n-APV}, mean victimized non-aggressor adolescent group; SD_{n-APV}, standard deviation victimized non-aggressor adolescent group; d, Cohen's d; PS_{ES}, Probability of Superiority of the Effect Size. ***p < 0.001, **p < 0.01, *p < 0.05.*

have questioned the relevance of gender socialization in this particular phenomena.

Moreover, the results corroborated greater maladjustment in adolescents who engaged in psychological and/or physical violence toward their parents (Ibabe et al., 2013; Ibabe, 2014) in significant areas of functioning (e.g., psychological, personal, and school) of their lives (Seijo et al., 2016). Whether maladjustment causes violent behavior or inversely, the latter causes maladjustment, is an issue that goes beyond the scope of this study as the methodology was not designed to establish the causality of this relationship. Nevertheless, the findings underscored the need for multimodal and multilevel prevention, in accordance with the non-model approach (Arce et al., 2014; Basanta et al., 2018). Thus, it is of vital importance to determine the precise personal, family, and social needs for the psychological adjustment of adolescents involved in APV, and to estimate the magnitude in order to design and develop efficacious prevention programs and interventions (Mayorga et al., 2020).

The scientific literature has highlighted the importance of parenting in terms of parental socialization styles in generating and maintaining APV (Laurent and Derry, 1999; Cottrell and Monk, 2004; Contreras and Cano, 2014; Calvete et al., 2015; Suárez-Relinque et al., 2019). The loss of parental authority, lack of discipline and consistent norms, and poor affection and support were characteristics of families exposed to APV (Ibabe et al., 2013; Calvete et al., 2015). The results showed that adolescents engaged in APV reported higher levels of strictness and supervision both in paternal and maternal parenting. Furthermore, they reported more indifference and less affect, acceptance, and involvement in childrearing only in the maternal parenting style (Aroca-Montolío et al., 2012; Contreras and Cano, 2014; Calvete et al., 2015; Ibabe, 2015). The results corroborated the literature regarding the importance of mother positive parenting as a protective factor (Kawabata et al., 2011), however, they do not support this relationship for a father parenting style, giving more relevance to the mother's one. Furthermore, in accordance with the current approach of Positive Parenting of the Council of Europe (Council of Europe, 2006), the conception of traditional parenting associated to authority, discipline, and obedience should be replaced by the broader concept of parental responsibility (Fariña et al., 2017), which is particularly aimed at satisfying the needs of adolescents and safeguarding their rights and wellbeing, ensuring respect for parents, and analyzing specific parenting techniques and the quality of child parent relations (Simmons et al., 2018). In this way, the affectivity and quality of family relationships are essential to prevent the development and maintenance of APV (Contreras and Cano, 2014; Ibabe and Bentler, 2016; Beckmann et al., 2017; Suárez-Relinque et al., 2019). Therefore, programs aimed at parental warmth are recommended (Bisby et al., 2017; Curtis et al., 2019).

The exposure to family violence as a variable linked to APV has been well documented in the literature (Ibabe et al., 2013; Loinaz et al., 2018). Recent studies have revealed that both direct and vicarious victimization were directly related to growing

violence (Kennedy et al., 2010; Ibabe, 2015; Izaguirre and Calvete, 2017; Gallego et al., 2019). The results of the present study have corroborated this relationship with a large effect size. However, the results should be interpreted with caution given that the transversal design of this study was not designed to establish causal relations, and in spite of delimiting the temporal criterion of the previous year in applying the measures, it was impossible to determine the dynamics of violent relations if the violent behavior of adolescents was a reactive response to victimization or if the violent behavior of parents was a response to the violent behavior of adolescents (Brezina, 1999). Thus, APV should be assessed through the simultaneous analysis of growing violence and parent-to-child violence (Seijo et al., 2016), and growing violence as a predictor of parent-to-child violence (Gallego et al., 2019).

The presence of violent dynamics in the family should be considered a risk factor for the development of adolescents (Loinaz et al., 2018; Schmidt et al., 2018) and stifles and/or negatively influences the adjustment of adolescents in a range of significant areas of functioning. The results showed that adolescents who have suffered victimization and engaged in APV exhibited a higher psychological, personal, and school maladjustment (Castañeda et al., 2012; Ibabe, 2014; Rosado et al., 2017), in comparison to adolescents who did not exercise growing violence. According to several publications of the American Academy of Pediatrics, victimization in the family is considered to be an adverse childhood experience, a risk to health, and for the positive development of the adolescents (Garner et al., 2012; Exner-Cortens et al., 2013). As a toxic stress factor, it activates extreme and long lasting physiological responses to stress (Ecological and Biological Development Perspective). This exposure causes psychological injury and has negative implications on the physical and psychological development of adolescents (Garner et al., 2012; Exner-Cortens et al., 2013; Corrás et al., 2017).

Nonetheless, the results of the present study are subjected to limitations concerning generalizations: the sample size, transversal study design, and self-report of victimization may be biased by defensiveness—underreporting response bias (Harbin and Madden, 1979; Arce et al., 2015a). Further research to examine the different systems involved in APV (Cottrell and Monk, 2004), and to establish a measure of APV with clearly defined strict criteria is needed (Gallego et al., 2019). It is worth noting that none of the APV measurement instruments available evaluates recidivism that is a critical aspect, particularly in terms of psychological violence, the intent to cause harm, nor the injury caused (Arce et al., 2015b).

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

All authors have participated in the collection of the participants' data and managed their statistical treatment, and proceeded to the writing of the manuscript. DS, MN, and RG have directed all the work, participated in the interpretation and discussion of the data, as well as made interesting intellectual contributions in relation to the elaboration of the conclusions. Finally, all the signatories, one by one, have approved the final version of the manuscript for publication. Therefore, all authors are responsible and guarantee that all aspects that make up the manuscript have been reviewed and discussed among the authors in order to be exposed with the maximum precision and integrity.

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Assessing Child-to-Parent Violence With the Child-to-Parent Violence Questionnaire, Parents' Version (CPV-Q-P): Factor Structure, Prevalence, and Reasons

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Child-to-parent violence has dramatically risen in the last decade, becoming a concerning issue in many countries, so research on this issue has also increased. However, most of the studies on this topic have been conducted with samples of adolescents, and very few with samples of parents. In addition, the variety of assessment instruments does not reflect the elements of this type of violence. Thus, the current study was aimed to examine the factor structure, reliability, and validity of the Child-to-parent Violence Questionnaire, parents' version (CPV-Q-P), in a sample of Spanish parents of adolescents. Moreover, the prevalence rates of the different types of violence and the reasons for violence were also examined. A total of 1,012 Spanish parents of adolescents aged between 12 and 17 years old (55.1% mothers, 44.9% fathers) were assessed using the CPV-Q-P. Data indicated a matrix of four factors with 14 items, assessing psychological violence, physical violence, financial violence, and control/domain over parents, and two factors with 8 items capturing the reasons for child-to-parent violence (instrumental and reactive), with adequate psychometric properties. The more frequent type of violence was control and domain over parents, followed by psychological, financial, and physical violence, with no significant differences between mothers and fathers. Otherwise, instrumental reasons were more frequent than reactive types, with no differences between mothers and fathers. The CPV-Q-P is a useful instrument to assess child-to-parent violence from the parents' perspective in both professional and research settings.

Keywords: child-to-parent violence, parents, adolescents, assessment, prevalence

INTRODUCTION

Child-to-parent violence (CPV) has dramatically increased in the last decade, becoming a concerning issue across different countries (e.g., Margolin and Baucom, 2014; Ibabe, 2016; Beckmann et al., 2017; Simmons et al., 2018; Contreras et al., 2020). This type of family violence is defined as those behaviors that are intended to cause psychological, physical, or financial damage to gain power and control (Cottrell, 2001) and to dominate parents

(Howard and Rottem, 2008, p. 10; Molla-Esparza and Aroca-Montolío, 2018, p. 17). Some authors also indicate that, in CPV cases, it is necessary to exclude isolated acts of violence (Pereira et al., 2017; Molla-Esparza and Aroca-Montolío, 2018).

Regarding the different types of CPV according to Cottrell (2001), psychological violence refers to some behaviors such as intimidations and threats, among others, and also to verbal behaviors such as shouting, insulting, or challenging. Physical violence refers to acts such as pushing, kicking, or punching, and financial violence includes behaviors such as stealing money or parents' belongings, demanding parents buy things they feel they cannot afford, or incurring debts the parents must cover. The control, domination, and power over parents are reflected in such behaviors as making unrealistic demands on parents (for example, insisting they drop what they are doing to comply with the child's demands) or controlling the running of the household. These types of abuse can occur at the same time, and in fact, they overlap to a certain extent (Cottrell, 2001), resulting in an escalation of violence from psychological abuse to a more severe form of violence such as physical abuse (Cottrell, 2001; Eckstein, 2004). In addition, CPV behaviors can be reactive or instrumental (Calvete et al., 2015; Contreras et al., 2019, 2020). Reactive violence occurs in response to a previous provocation, real or perceived, whereas instrumental violence refers to the use of aggression to obtain something (Crick and Dodge, 1996).

In Spain, the Fiscalía General del Estado de España (2020), in its last report, expresses concern about the notable increase in CPV cases over the last decade (4,665 in 2017, 4,871 in 2018, and 5,055 in 2019). Nevertheless, as these data refer to those reported cases at Juvenile Court, it is expected that many cases of CPV remain unknown. In this regard, studies with community samples provide a relevant source of information about the extent of CPV. There are many field studies across countries in which adolescents report CPV incidents, but studies with samples of parents reporting their children's violent behaviors are scarce. However, to know the parents' perspectives about CPV is crucial for a more accurate understanding of this phenomenon (Contreras et al., 2019), as some discrepancies have been observed between adolescents' reports and parents' reports (Calvete et al., 2017; Ibabe, 2019) in the sense that parents may underestimate the violence they suffer from their children (Calvete et al., 2017). Most of these studies had been conducted with qualitative methods such as interviews or focus groups with parents (e.g., Jackson, 2003; Cottrell and Monk, 2004; Edenborough et al., 2008). The studies with quantitative methods and their assessment instruments are briefly described below.

Some authors have focused exclusively on child-to-mother violence, such as, for example, Edenborough et al. (2011), who developed the Child-to-Mother Scale (CMVS), which includes nine items measuring a unidimensional construct of CPV. The instrument also incorporated a second part exploring triggers of threatening and/or violent behaviors, but the authors did not report the prevalence rates of CPV. In this line, Abbaspour et al. (2019) recently developed and validated the Parent Abuse Scale (girl-mother). This scale is composed of 14 items describing physical and emotional violent behaviors, and the authors do not inform about prevalence rates of CPV in Iran in their study. Very recently, Simmons et al. (2019a) have designed the Abusive Behavior by Children-Indices (ABC-I), an instrument aimed to differentiate normative behavior towards parents from CPV with 10 behavior descriptors of physical aggression, verbal aggression, and coercive behavior (which includes financial and emotional abuse). In this study, 38% of parents described their child as abusive. However, as these items were derived from the Beliefs About Child-to-Parent Abuse Questionnaire (BACPAQ; Simmons et al., 2019b), a previous study on social norms about CPV in Australia, the authors recommend, in case of research outside this country, the administration of the BACPAQ together with the ABC-I to identify cultural-specific thresholds for abuse.

In the Spanish context, Calvete et al. (2017) assessed 880 parents of adolescents from the Basque Country with the parent's version of the Child-to-Parent Aggression Questionnaire (CPAQ; Calvete et al., 2013). This instrument is composed of 10 items, from which seven describe psychological aggression and three describe physical aggression. More recently, Ibabe (2019) evaluated a sample of 161 pairs of parents (mothers and fathers) of adolescents aged 12–18 with a version of the Conflict Tactics Scale Child-Parents (CTS1, Straus et al., 1998). This scale contains 13 items to assess psychological and physical violence. Regarding the prevalence rates in Spain, when CPV is evaluated considering the presence of violent acts at least in one occasion in the last year, psychological violence oscillates between 81.9 and 88% towards the mother, and between 75.7 and 82% towards the father. Physical violence oscillates between 2.3 and 10.9% and between 1.9 and 6.9% towards the mother and the father, respectively (Calvete et al., 2017; Ibabe, 2019). When prevalence is estimated assessing reiterated violence, results show 6.4 and 4.8% of psychological violence towards the mother and father, respectively, as well as 2.8 and 1.2% of physical violence towards the mother and father, respectively (Calvete et al., 2017).

The study of a complex phenomenon such as CPV requires the assessment of different sources of information (perpetrator and victim), as it is important to explore their perceptions of the problem. As reflected, the available instruments to assess CPV from the parents' perspectives are very scarce and they reflect the variability and inconsistency in the conceptualization of this phenomenon in each study. Some of these instruments assess only some types of CPV, such as psychological and physical violence towards parents (Calvete et al., 2017; Ibabe, 2019) or emotional and physical violence (Abbaspour et al., 2019). Otherwise, some scales are focused exclusively in child-to-mother violence (Edenborough et al., 2011; Abbaspour et al., 2019). Thereby, we intend to develop and validate an instrument that assesses a wide range of CPV behaviors from the parents' perspective, including psychological, physical, and financial violence (Cottrell, 2001), and also control (Cottrell, 2001) and domain over parents (Howard and Rottem, 2008; Molla-Esparza and Aroca-Montolío, 2018), as this is a crucial component of CPV. In fact, in CPV cases, there is an inversion of conventional power relations within the family, changing the traditional and

expected parents-children power relation into a relation in which children have the power over parents (Tew and Nixon, 2010). In this regard, although the ABC-I (Simmons et al., 2019a) incorporates a coercive component, it refers to financial violence (e.g., "Stole money or possessions from parents") and emotional abuse (e.g., "Attempted to intimidate a parent"). Very recently, Contreras et al. (2019) have developed and validated the Child-to-parent Violence Questionnaire, adolescent's version (CPV-Q) with good psychometric properties. This instrument consists of 14 parallel items measuring different acts of CPV (psychological, physical, and financial violence, and control/domain over parents) and also includes eight reasons for the aggressions against parents. Its structure has been also replicated with other samples of adolescents from other countries (e.g., Jiménez-García et al., 2020). Consequently, the main purpose of the current study is to examine the structure, reliability, and validity of the Child-to-parent Violence Questionnaire, parents' version (CPV-Q-PV) in a sample of Spanish parents of adolescents. The CPV-Q-P includes the same violent behaviors towards parents as the adolescents' version. In addition, this study is also aimed to explore the prevalence rates of the different types of CPV and the reasons for the violence, from the parents' perspectives.

MATERIALS AND METHODS

Sample

The sample consisted of 1,012 parents of adolescents aged between 12 and 17 years old (55.1% mothers, M_{age} = 46,19, SD = 6.27; 44.9% fathers, M_{age} = 48.34, SD = 6.27), from Andalucía (Southern Spain). The 85% of parents were married, 8.8% were divorced or separated, and 3.6% were living together but not married.

We calculated the minimal sample size at 95% confidence level, with a 5% confidence interval at 80% of statistical power. In this regard, the estimated minimum sample size was 385. Following Hair et al. (2010), the general rule to estimate the minimum sample size to perform factor treatment in a survey implies to have a minimum of five observations per variable (5:1). In our study, as the scale consisted of 22 items, the minimum sample size for the factorial treatment would be 111.

Instruments

The Child-to-Parent Violence Questionnaire, Parents' Version

It comprises a total of 14 items (as in the adolescents' version) referring to different acts of psychological (four items), physical (three items), and financial violence (three items), and also behaviors demonstrating control and domain over parents (four items) (see **Appendix**). In this version, parents are asked to indicate how often their children have showed each of the behaviors against them in the past year, with a five-point scale of frequency: 0 (never), 1 (rarely = it has occurred once), 2 (sometimes = 2–3 times), 3 (many times = 4–5 times), and 4 (very often = more than 6 times). It also includes eight reasons for the aggressions against parents, instrumental (five items) and reactive (three items), also using a four-point scale: 0 (never), 1 (sometimes), 2 (almost always), and 3 (always). This second part of the instrument is completed if participants respond positively to the items of the aggressions.

The Warmth Scale (WS), Parents' Version

The WS (Fuentes et al., 1999) consists of 20 items, with two factors referring to the support dimension of the parenting style: Affection/Communication and Criticism/rejection by parents towards their children. Each factor includes 10 items with a scale ranging from 1 (never) to 5 (always). In this study, Cronbach's alpha was 0.90 for the Affection subscale and 0.85 for Criticism/rejection subscale.

Procedure

We obtained authorization from the Ethics Committee of the University of Jaén (Spain) (reference OCT.19/1.PRY). The sample was firstly obtained through contact with different high schools, offering to parents of adolescents aged 12–17 years to participate in this study. Then, the sample was completed with snowball sampling. This is a process where initial informants are recruited and then are asked to use their networks to recruit additional participants (Jackson et al., 2003). Participants received and signed the informed consent previously to the assessment, and each participant received an identification code to guarantee the confidentiality of the data. The study was conducted with PAPI (Paper-and-Pencil Interviewing). No incentive was offered in exchange for participation, and the evaluations were conducted individually.

Data Analysis

The R software was used to conduct all analyses. The α value for all statistical tests was set to 0.05. Data screening was performed before doing the factorial analysis to evaluate the distribution of data and assumptions. For missing values, treatment multiple imputation was made with the MICE package of R (Buuren and Groothuis-Oudshoorn, 2011). The lavaan R package (Rosseel, 2012) was used to conduct confirmatory factorial analysis (CFA). Robust maximum likelihood (MLR) with robust standard errors and a scaled test statistic was used as estimation method for CFA (Finney and DiStefano, 2013) to account for multivariate non-normality. The estimation errors resulting from CFA that shared the same latent variable with a Modification Index (IM) greater than 10.83 (α = 0.001) were covariates (Hermida, 2015). Cronbach's α and McDonald's ω were used to measure the reliability of the scale. Furthermore, following Carretero-Dios and Pérez (2007), the correlations between each dimension of the CPV-Q-P and the dimensions of the WS (Fuentes et al., 1999) were used to search for external evidence of validity (convergent validity), as previous studies have found that CPV is related both to lower levels of affection/communication and to higher levels of Criticism/rejection from parents (Gámez-Guadix et al., 2012; Contreras and Cano-Lozano, 2014).

Otherwise, the percentages of the types of CPV (psychological, physical, financial, and control/domain) towards the mother and the father were calculated. Differences between fathers and mothers were examined through the chi square statistic, analyzing the effect size with the *V* Cramer coefficient. In this regard, we first explored the presence of any type of CPV behavior, at least in one occasion in the last year (any answer different from 0 in the response scale), which provides a general perspective of the more frequent CPV behaviors. In addition, in order to obtain a more relevant indicator, we also estimated the presence of CPV considering the percentage of parents who reported having received those violent behaviors repeatedly in the last year (response 2 or higher in the Likert scale), for each type of CPV. Besides, to explore the mean differences between fathers and mothers regarding the reasons for CPV, *t*-test for independent samples was carried out, calculating the effect size through eta square statistic. Finally, the invariance of the model proposed for the parents' gender at the configural, metric, scalar, and strict level was analyzed.

RESULTS

Before the factorial treatment of the scale, it was necessary to evaluate the previous assumptions to verify that the data could be treated by this type of analysis. For additivity, we tested the correlations between the items. No item showed multicollinearity ($r > 0.90$) or singularity ($r > 0.95$). A linear regression was generated with random numbers and scale scores to evaluate the assumptions of linearity, homogeneity, and homoscedasticity. The distribution of the residues resulting from the regression was evaluated. The resulting distribution was not violating any assumptions, showing a distribution of standardized regression residuals mostly between −2 and +2.

Confirmatory Factor Analysis

The estimator used for the CFA was MLR, as our data did not show multivariate normality (Maximum Likelihood estimation with Robust, Hardin and Hilbe, 2012. The results showed a good fit of the model (Hair et al., 2010), χ^2 (189) = 561.95, $p < 0.001$, CFI = 0.918, TLI = 0.899, SRMR = 0.053, RMSEA = 0.044 (RMSEA 90% CI [0.041, 0.047]), AIC = 55,512, and BIC = 55,827. The reliability analysis resulted in $\alpha = 0.755$, $\omega = 0.779$, indicating that the scale showed acceptable reliability. **Table 1** shows the factor loading and internal consistency of the factors. All the covariation relationships between variables were significant (see **Table 2**).

Parental Gender Invariance

The dimensionality of the model was explored with the analysis of the invariance for the parents' gender. This analysis was aimed to assess if the dimensionality of the model was equivalent for the mother and the father. **Table 3** shows the results of the analysis of invariance for configural, metric, scalar, and strict levels. As shown, all the levels of invariance were reached, as the changes from one level to another level were not different more than 0.01 in CFI, together with the changes of RMSEA higher than 0.015 with respect to the more restrictive model (Chen, 2007).

TABLE 1 | Factor loading and internal consistency of the factors of the Child-to-parent Violence Questionnaire, Parents' version (CPV-Q-P).

Item	I	II	III	IV	IR	RR
CPV behaviors						
1	0.68					
2	0.65					
3	0.69					
4	0.69					
8		0.84				
10		0.74				
11		0.63				
6			0.64			
7			0.71			
12			0.68			
5				0.41		
9				0.64		
13				0.83		
14				0.62		
Reasons for CPV						
1					0.66	
2					0.79	
3					0.75	
4					0.60	
5					0.50	
6						0.54
7						0.49
8						0.54
Cronbach's α	0.80	0.77	0.54	0.67	0.77	0.52
McDonald's ω	0.81	0.82	0.68	0.70	0.78	0.62

CPV, child-to-parent violence; I: psychological; II: physical; III: financial; IV: control/domain; IR, instrumental reasons; RR, reactive reasons.

Evidence of Convergent Validity

The correlations between the dimensions of the CPV-Q-P and the dimensions of the Warmth Scale (Affection/Communication and Criticism/rejection) were all statistically significant ($p < 0.001$). Concretely, CPV dimensions were related to lower levels of affection/communication and to higher levels of Criticism/rejection (see **Table 4**).

Prevalence of CPV

Table 5 shows the percentages of types of CPV towards mothers and fathers. The more frequent type of CPV was control/domain, followed by psychological, financial, and physical violence. With respect to the differences according to the victims' gender, although mothers reported higher frequencies in CPV behaviors in comparison to fathers, results indicated no statistically significant differences between mothers and fathers in the proportion of any type of violence. Regarding the reasons for CPV, instrumental reasons were more frequent than reactive reasons, with no significant differences between mothers and fathers (see **Table 5**).

TABLE 2 | Factor covariances for latent variables.

				95% CI				
		Estimate	SE	Lower	Upper	*Z*	*p*	Standard Estimate
Psychological	Phy	0.71	0.028	0.66	0.77	25.2	<0.001	0.71
	Fin	0.79	0.027	0.73	0.84	28.5	<0.001	0.79
	C.D	0.73	0.027	0.67	0.78	26.4	<0.001	0.73
Physical	Fin	0.71	0.028	0.65	0.76	25.3	<0.001	0.71
	C.D	0.62	0.029	0.56	0.68	21.4	<0.001	0.62
Financial	C.D	0.63	0.030	0.57	0.69	21.1	<0.001	0.63
IR	RR	0.77	0.043	0.69	0.86	17.9	<0.001	0.77
CPV	Psy	1.34	0.369	0.61	2.56	3.64	<0.001	0.93
	Phy	0.60	0.145	0.31	1.23	4.14	<0.001	0.75
	Fin	0.90	0.195	0.51	1.91	4.61	<0.001	0.86
	C.D	0.72	0.098	0.52	1.76	7.34	<0.001	0.80
CPV	IR	0.80	0.030	0.74	0.86	26.93	<0.001	0.48
	RR	0.78	0.062	0.66	0.91	12.67	<0.001	0.42

Psy, psychological; Phy, physical; Fin, financial; C.D, control/domain; CPV, child-to-parent violence; IR, instrumental reasons; RR, reactive reasons.

TABLE 3 | Fit indices for parental gender invariance.

	Chi	*df*	*p*	CFI	ΔCFI	RMSEA	RMSEA (CI 90%)	ΔRMSEA
Configural	809.82	378	<0.01	0.913	-	0.062	0.056–0.068	-
Metric	772.70	390	<0.01	0.917	0.004	0.060	0.053–0.066	–0.002
Scalar	806.44	412	<0.01	0.917	0.000	0.058	0.052–0.064	–0.002
Strict	784.25	434	<0.01	0.920	0.003	0.055	0.049–0.062	–0.002

df, degree of freedom; CFI, comparative fit index; RMSEA, root mean square error approximation; ΔCFI, comparative fit index increase; CI, confidence interval; ΔRMSEA, root mean square error approximation increase.

DISCUSSION

The main objective of the current study was to analyze the factor structure, reliability, and validity of the CPV-Q-P in a sample of Spanish parents of adolescents. In addition, this study was also aimed to explore the prevalence rates of the different types of CPV and the reasons for the violence from the parents' perspectives. The CFA indicated that the CPV-Q-P shows a structure with four factors (psychological violence, physical violence, financial violence, and control/domain), with adequate psychometric properties. The CPV-Q-P also includes eight reasons for CPV, grouped into two factors (reactive and instrumental reasons), also with adequate psychometric properties. Consequently, the structure obtained for the CPV-Q-P is similar to the adolescents' version (CPV-Q, Contreras et al., 2019). Regarding the provision of convergent validity, the results indicate that the CPV behaviors are related to lower levels of affection/communication and to higher levels of Criticism/rejection from parents, in line with previous studies (Gámez-Guadix et al., 2012; Contreras and Cano-Lozano, 2014).

With regard to the prevalence rates, results showed that the more frequent type of CPV was control/domain, followed by psychological, financial, and physical violence. In respect of the differences according to the victim's gender, although mothers reported higher frequencies in all the CPV behaviors in comparison to fathers, data indicated no statistically significant differences between fathers and mothers in the proportion of any type of violence. Similarly, other studies also show higher frequencies of violence towards the mother than the father (Calvete et al., 2017; Ibabe, 2019). When CPV is evaluated considering the presence of violent acts at least in one occasion in the last year, our percentages are lower than those found in previous studies in the Spanish context (Calvete et al., 2017; Ibabe, 2019). One explanation could be that in the questionnaire used in the study by Calvete et al. (2017) (the CPAQ; Calvete et al., 2013), it included the item "You have shouted at your parents when you were angry" to evaluate psychological violence, whereas this behavior is not evaluated in the CPV-Q-P. This item refers to a very frequent behavior in adolescents in their relationships with their parents during this life period, so it is likely that most of the adolescents inform having shouted at their parents at least once during the last year. This could have caused the high percentages of this type of CPV in previous studies. Otherwise, percentages of physical violence towards the mother and the father are in line with previous results (Calvete et al., 2017; Ibabe, 2019).

Estimating the prevalence assessing reiterated violent acts gives us a more accurate picture of the real cases of CPV. In fact, as adolescence is usually a time of tension between parental authority and adolescent's increasing need for autonomy, it is necessary to mark a clear boundary between CPV and problematic behaviors that could be regarded as "usual" adolescent behavior (Coogan, 2011). When CPV is evaluated in this way, percentages of psychological and physical violence are more similar to

TABLE 4 | Bivariate correlations between the dimensions of the Child-to-parent Violence Questionnaire, Parents' version (CPV-Q-P) and the dimensions of Warmth Scale.

	Psychological	Physical	Financial	Control/domain	Instrumental reasons	Reactive reasons
Affection	−0.241	−0.200	−0.287	−0.266	−0.323	−0.243
Criticism	0.312	0.255	0.303	0.317	0.332	0.328

All correlations were significant at the $p < 0.001$ level.

TABLE 5 | Percentages of CPV and reasons (means) for CPV. Differences among father and mother.

Types of CPV	Total *N* = 1,012 (%)	Mother *n* = 558 (%)	Father *n* = 454 (%)	χ^2	*V*
At least in one occasion					
Psychological	45.50	25.70	19.80	0.65	0.02
Physical	7.40	4.20	3.20	0.15	0.01
Financial	33.60	18.30	15.30	0.11	0.01
Control/domain	78.60	43.60	35.00	0.16	0.01
Reiterated violence					
Psychological	18.60	11.20	7.40	2.30	0.05
Physical	2.60	1.70	0.90	1.13	0.03
Financial	13.60	6.80	6.80	1.70	0.04
Control/domain	52.40	29.30	23.00	0.36	0.02
Reasons for CPV	**Total**	**Mother**	**Father**	***t***	η^2
	M (SD)	***M (SD)***	***M (SD)***		
Instrumental	0.47 (0.51)	0.44 (0.49)	0.51 (0.53)	1.89	0.00
Reactive	0.41 (0.46)	0.40 (0.44)	0.42 (0.48)	0.736	0.00

CPV, child-to-parent violence.

previous literature (Calvete et al., 2017). In respect of financial violence, previous studies with parents have not reported data on this type of violence, so we cannot compare our results. Otherwise, our study reveals that control and domain over parents are the more frequent types of CPV. In this regard, "such misuse of power by the child clearly distinguishes CPV from the kind of behaviors that may be regarded as part of conventional journey through developmental stages" (Coogan, 2014, p. 4). However, as no previous researches have explored this particular form of CPV, it is not possible to compare our data about control and domain over parents with previous literature. Finally, with respect to the reasons for CPV, parents reported instrumental reasons with higher frequency than reactive reasons, with no differences between mothers and fathers.

Notwithstanding, this study presents some limitations that must be considered. First, these data refer to a wide sample of Spanish parents of adolescents that belong to a particular cultural and social context, so this aspect must be considered when generalizing the results. Second, future studies should provide, for example, the test–retest reliability of the scale. Despite these limitations, the results indicate that the CPV-Q-P is a valid instrument for assessing a wide variety of CPV behaviors from the parents' perspective, together with the reasons for the violence. As aforementioned, exploring the perspectives of the actors involved in CPV (parents and children) is basic, as they might have different perceptions of the problem. This fact has clear implications. Regarding the research field, having both sources of information gives us a more accurate picture of the reality of this phenomenon. In respect of the professional context, knowing both perceptions of the problem will facilitate the design of specific treatment program for families immersed in this type of violence, in which the intervention with both children and parents is crucial. Finally, now that we have a validated instrument to assess CPV, with two parallel versions (adolescents and parents), in future studies, we will investigate this type of violence with samples of adolescents and parents together, with the aim to conduct an integral evaluation of this form of family violence.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee of the University of Jaén (Spain; reference OCT.19/1.PRY). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

LC and MC-L: conceptualization, methodology, writing — review, editing, and funding acquisition. SL: validation, formal analysis, and data curation. LC, MC-L, and SL: writing — original draft preparation. LC: project administration.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2020.604956/full#supplementary-material

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REVIEW
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A Systematic Review of Youth-to-Parent Aggression: Conceptualization, Typologies, and Instruments

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The goal of this study was to analyze the conceptualization of YPA (youth-to-parent aggression) in relation to terms, definitions, typologies and assessment instruments. To achieve this aim, a systematic review was carried out using the PRISMA protocol. Assessment instruments for YPA were examined in accordance with COSMIN (Consensus-based Standards for the Selection of Health Measurement Instruments). After reviewing the literature on conceptualization and measuring instruments, some gaps were found. The use of some particular terms was justified depending on the age of children and severity of case. Taking into account the theoretical background, a full definition of YPA was offered. Moreover, this study revealed that it was possible to discriminate four typologies of YPA (Offensive, Defensive, Affective, and Situational) as a function of the coercion level and nature of the violence. Eleven instruments to measure YPA were analyzed exhaustively, with the most reported and robust psychometric properties being internal consistency and structural validity, while other validity evidence was understudied. The CPV-Q (12–25 years) obtained the highest rating as a promising instrument. The initial psychodiagnosis of a YPA situation would help in the individual or family intervention, as well as prevent more severe situations of YPA through early intervention.

Keywords: youth-to-parent aggression, child-to-parent aggression, child-to-parent violence, conceptualization, instruments

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INTRODUCTION

During last decade, youth-to-parent aggression (YPA) has received growing attention in scientific literature as a result of the progression in complaints filed by parents. This type of family violence puts family safety at risk due to the loss of parental power that it generates, and at the same time the most victimized parents feel guilt and humiliation (Selwyn and Meakings, 2015; Gabriel et al., 2018; Ilabaca and Gaete, 2018). As the number of complaints in Spain of YPA has been stable over the last decade, it is possible that this type of crime has become consolidated as a problem endemic to society (General Prosecutor's Office of Spain, 2018). In YPA research, it is necessary to operationalize the term "child" because perpetrators older than 18 years are legally considered adults rather than children. In their review of community samples, Simmons et al. (2018) estimated the previous-year incidence of physical YPA between 5 and 21%, usually based on adolescent samples. In the United States, 10% of the assaults committed

by young people between 18 and 25 years are against their parents (Snyder and McCurley, 2008). In Spain, 5% of college students perpetrated physical YPA during the past year, taking into account the technical abuse criteria (Ibabe et al., 2020). In a study based on an Australian sample in the 14–25 years age range, 7% of physically abusive behavior toward one parent was reported (Simmons et al., 2019a). All these data reveal the extent of this family and community problem. In order to generalize study results, it is key to specify the age of perpetrators and severity of violent behavior. The consolidation of abusive behavior can gradually lead to the emergence of a criminal trajectory. The Juvenile Court specifies that these offenses are among those presenting the highest problems (General Prosecutor's Office of Spain, 2018).

One of the best-known definitions of YPA is the one provided by Cottrell (2001). This definition identifies any behavior of a child with the intention of inflicting physical, psychological or financial damage to get power and control over a parent. According Holt (2016), it is an abusive behavior perpetrated toward a parent by a legally recognized child, usually living in the family home. Moreover, Pereira et al. (2017) defined it as a repeated violent behavior, directed toward the parents or the people who act as parents. These definitions show different characteristics, such as intentionality to cause damage, legally recognized child or living at home. The use of different conceptual and operational definitions to study YPA can obscure the true prevalence rates as well as the capacity to identify risk factors for this type of abuse (Simmons et al., 2018). With respect to assessment instruments, Arias-Rivera et al. (2020) analyzed available instruments to measure YPA. Empirical studies with adolescents (10–19 years) in Spanish and English from 2000 to 2017 were examined. Authors identified only two instruments specifically assess YPA, and they concluded it is questionable using measures of interpersonal conflict or violence for the assessment of YPA.

Objective of the Study

The goal of this study was to provide a systematic review of the conceptualization of YPA (terms, definitions, typologies, and assessment instruments). To achieve this aim, a narrative analysis of papers in the systematic review was carried out with the PRISMA protocol (Urrútia and Bonfill, 2010). To evaluate the quality of the identified instruments, the updated revised COnsensus based Standards for the selection of health Measurement INstruments (COSMIN) methodological guidelines (Mokkink et al., 2018; Prinsen et al., 2018) was applied. Based on the outcomes of the review, this paper discusses the inconsistencies found in conceptualization of YPA, and the best assessment instruments, concluding with suggestions that can advance the understanding of this emergent family violence.

METHODS

This systematic review is based on the PRISMA guidelines with a 27-item checklist. The selection process of the incorporated studies is outlined in the flow diagram (**Figure 1**).

Terms, Definitions, Typologies, and Instruments Most Used for YPA

Search Strategy

To identify all terms, definitions and instruments potentially pertinent to the review purpose, the searches were conducted in Web of Science (the largest multidisciplinary platform with high-quality studies). On the one hand, Web of Science Core Collection is a select collection of over 21,000 peer-reviewed, high-quality academic journals published worldwide in over 250 disciplines. On the other hand, Medline is the principal database of the U.S. National Library of Medicine, and it includes more than 12 million journal articles in the life sciences. For this reason, the systematic searches were done in the Web of Science Core Collection and Medline (**Table 1**).

The systematic search was limited to the terms ("parent abuse," "child-to-parent abuse," "child-to-parent violence," "child-to-parent aggression," "youth-to-parent aggression," "youth-to-parent violence," "youth-to-parent abuse," "youth aggression toward parents," "youth violence toward parents," "child-to-mother aggression," "child-to-father aggression," "teenage violence toward parents," "adolescent-to-parent violence," "adolescent-to-parent aggression," "adolescent-parent abuse," "adolescent aggression toward parents," "adolescent violence toward parents," "adolescent abuse toward parents," "child-to-father violence," "child-to-mother violence," "child-initiated family violence," "adolescent-initiated parent abuse," "battered parent," "violence against parents," "juvenile domestic violence," "adolescent family violence," "youth violence in the home," "teen violence toward mothers," "parents abused by children," "adolescent violence in the home," "parent-directed aggression," "violence by children against mothers," "aggression toward mothers," "aggression toward fathers," "mother abuse," "abuse toward mothers," "filioparental violence," "violence by children toward parents," "violence by adolescents toward parents," "parents abused by their children," "abuse of parents by their adolescent," "violence by children against parents," "violence by child to parent," "violence by adolescent to parent," "aggression by child to parent," and "parents victimized by their children") in topic search (title, abstract, author, keyword, and keyword plus), selecting journal articles published in English or Spanish up to September 2020, 189 journal articles returned.

Criteria for Selection

Inclusion criteria were used: (1) academic journals, (2) studies focused on children aged between 10 and 25 years, (3) theoretical and empirical studies, (4) terms in title, abstract or as keywords, (5) studies published in English or Spanish. Exclusion criteria for terms were: (1) parricide studies, (2) not including any research specifically examining elder abuse, and (3) conference proceedings and books.

Data Extraction

Retrieved articles from databases were exported to an excel file generated by RefWorks. This file contains information about articles: authors, title, journal, year of publication, abstract, DOI, and link to the article. Titles and abstracts of all the recovered articles were screened. After examining all the references, a list of

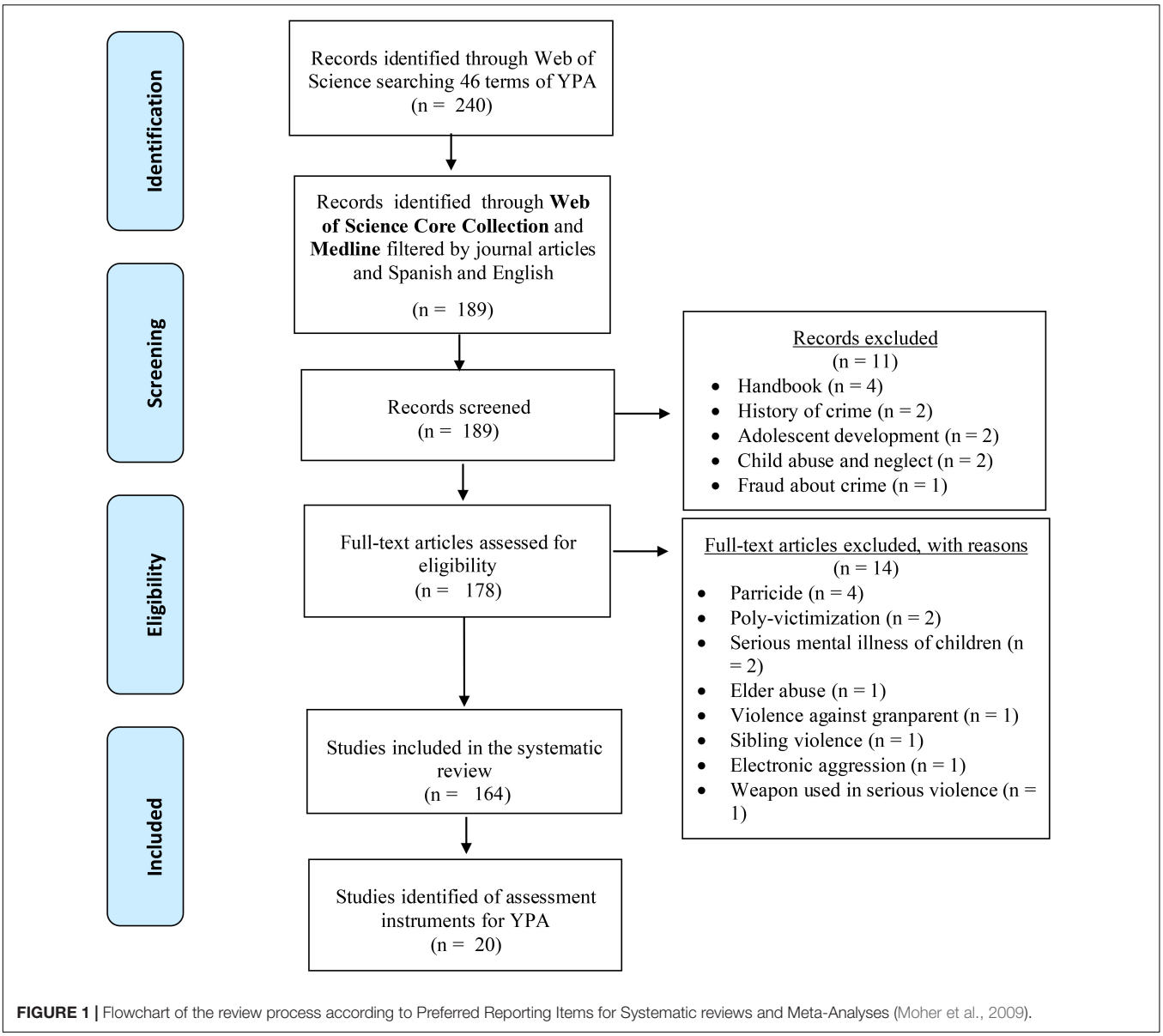

FIGURE 1 | Flowchart of the review process according to Preferred Reporting Items for Systematic reviews and Meta-Analyses (Moher et al., 2009).

potential papers was elaborated. These papers were exhaustively evaluated to determine if they satisfied eligibility criteria.

Identification of Studies Reporting Psychometric Properties

Selection Criteria for YPA Assessment Instruments

There were three inclusion criteria for assessment instruments: (1) quantitative measures specifically developed to assess YPA; (2) designed to assess YPA of children aged between 10 and 25 years; and (3) studies published until September of 2020. Meanwhile, exclusion criteria for assessment instruments were: (1) self-report rated by caregivers other than parents; (2) not using instruments to assess YPA within judicial samples (e.g., juvenile court records of YPA); (3) qualitative methods used to assess YPA; (4) instruments without information about psychometric properties.

Data Extraction

All papers that fulfilled eligibility criteria for systematic review were analyzed again to select papers fulfilling criteria for assessment instruments. For this selection, the Method section of each paper was examined.

Evaluation of the Quality of Informed Psychometric Properties

COSMIN guidelines (Mokkink et al., 2018; Prinsen et al., 2018) was applied to evaluate the quality of the selected instruments. This checklist is composed of ten psychometric sections (e.g., structural validity, criterion validity, internal consistency, reliability, cross-cultural validity, among others). Finally, instruments were classified according to global quality of evidence and results: Category A (recommended), Category B (may be used with caution) and Category C (not recommended).

TABLE 1 | Description of search strategy in Web of Science and results in all databases, without using filters of type of documents or languages.

WEB OF SCIENCE	Results
(TI = ("parent abuse" OR "child-to-parent abuse" OR "child-to-parent violence" OR "child-to-parent aggression" OR "youth-to-parent aggression" OR "youth-to-parent violence" OR "youth-to-parent abuse" OR "youth aggression toward parents" OR "youth violence toward parents" OR "child-to-mother aggression" OR "child-to-father aggression" OR "teenage violence toward parents" OR "adolescent-to-parent violence" OR "adolescent-to-parent aggression" OR "adolescent-parent abuse" OR "adolescent aggression toward parents" OR "adolescent violence toward parents" OR "adolescent abuse toward parents" OR "child-to-father violence" OR "child-to-mother violence" OR "child-initiated family violence" OR "adolescent-initiated parent abuse" OR "battered parent" OR "violence against parents" OR "juvenile domestic violence" OR "adolescent family violence" OR "youth violence in the home" OR "teen violence toward mothers" OR "parents abused by children" OR "adolescent violence in the home" OR "parent-directed aggression" OR "violence by children against mothers" OR "aggression toward mothers" OR "aggression toward fathers" OR "mother abuse" OR "abuse toward mothers" OR "filioparental violence" OR "violence by children toward parents" OR "violence by adolescents toward parents" OR "parents abused by their children" OR "abuse of parents by their adolescent" OR "violence by children against parents" OR "violence by child to parent" OR "violence by adolescent to parent" OR "aggression by child to parent" OR "parents victimized by their children"))	159
OR	
(AB = ("parent abuse" OR "child-to-parent abuse" OR "child-to-parent violence" OR "child-to-parent aggression" OR "youth-to-parent aggression" OR "youth-to-parent violence" OR "youth-to-parent abuse" OR "youth aggression toward parents" OR "youth violence toward parents" OR "child-to-mother aggression" OR "child-to-father aggression" OR "teenage violence toward parents" OR "adolescent-to-parent violence" OR "adolescent-to-parent aggression" OR "adolescent-parent abuse" OR "adolescent aggression toward parents" OR "adolescent violence toward parents" OR "adolescent abuse toward parents" OR "child-to-father violence" OR "child-to-mother violence" OR "child-initiated family violence" OR "adolescent-initiated parent abuse" OR "battered parent" OR "violence against parents" OR "juvenile domestic violence" OR "adolescent family violence" OR "youth violence in the home" OR "teen violence toward mothers" OR "parents abused by children" OR "adolescent violence in the home" OR "parent-directed aggression" OR "violence by children against mothers" OR "aggression toward mothers" OR "aggression toward fathers" OR "mother abuse" OR "abuse toward mothers" OR "filioparental violence" OR "violence by children toward parents" OR "violence by adolescents toward parents" OR "parents abused by their children" OR "abuse of parents by their adolescent" OR "violence by children against parents" OR "violence by child to parent" OR "violence by adolescent to parent" OR "aggression by child to parent" OR "parents victimized by their children"))	194
OR	
(AK = ("parent abuse" OR "child-to-parent abuse" OR "child-to-parent violence" OR "child-to-parent aggression" OR "youth-to-parent aggression" OR "youth-to-parent violence" OR "youth-to-parent abuse" OR "youth aggression toward parents" OR "youth violence toward parents" OR "child-to-mother aggression" OR "child-to-father aggression" OR "teenage violence toward parents" OR "adolescent-to-parent violence" OR "adolescent-to-parent aggression" OR "adolescent-parent abuse" OR "adolescent aggression toward parents" OR "adolescent violence toward parents" OR "adolescent abuse toward parents" OR "child-to-father violence" OR "child-to-mother violence" OR "child-initiated family violence" OR "adolescent-initiated parent abuse" OR "battered parent" OR "violence against parents" OR "juvenile domestic violence" OR "adolescent family violence" OR "youth violence in the home" OR "teen violence toward mothers" OR "parents abused by children" OR "adolescent violence in the home" OR "parent-directed aggression" OR "violence by children against mothers" OR "aggression toward mothers" OR "aggression toward fathers" OR "mother abuse" OR "abuse toward mothers" OR "filioparental violence" OR "violence by children toward parents" OR "violence by adolescents toward parents" OR "parents abused by their children" OR "abuse of parents by their adolescent" OR "violence by children against parents" OR "violence by child to parent" OR "violence by adolescent to parent" OR "aggression by child to parent" OR "parents victimized by their children"))	132
OR	
(KP = ("parent abuse" OR "child-to-parent abuse" OR "child-to-parent violence" OR "child-to-parent aggression" OR "youth-to-parent aggression" OR "youth-to-parent violence" OR "youth-to-parent abuse" OR "youth aggression toward parents" OR "youth violence toward parents" OR "child-to-mother aggression" OR "child-to-father aggression" OR "teenage violence toward parents" OR "adolescent-to-parent violence" OR "adolescent-to-parent aggression" OR "adolescent-parent abuse" OR "adolescent aggression toward parents" OR "adolescent violence toward parents" OR "adolescent abuse toward parents" OR "child-to-father violence" OR "child-to-mother violence" OR "child-initiated family violence" OR "adolescent-initiated parent abuse" OR "battered parent" OR "violence against parents" OR "juvenile domestic violence" OR "adolescent family violence" OR "youth violence in the home" OR "teen violence toward mothers" OR "parents abused by children" OR "adolescent violence in the home" OR "parent-directed aggression" OR "violence by children against mothers" OR "aggression toward mothers" OR "aggression toward fathers" OR "mother abuse" OR "abuse toward mothers" OR "filioparental violence" OR "violence by children toward parents" OR "violence by adolescents toward parents" OR "parents abused by their children" OR "abuse of parents by their adolescent" OR "violence by children against parents" OR "violence by child to parent" OR "violence by adolescent to parent" OR "aggression by child to parent" OR "parents victimized by their children"))	7
Total documents returned without duplicated publications	**240**

TI, title; AB, Abstract; AK, Author keyword (Keywords in their research publications specified by author); KP, Keyword plus (Important terms not listed among the author keywords automatically generated).

TERMS USED FOR YPA

There is marked variability in the way YPA is referred to in the scientific literature from 1957 until 2020 (**Table 2**). Terms such as parent abuse, parental aggression, or parental violence have been used to indicate YPA (Cottrell, 2001; Murphy-Edwards, 2016), but these terms can be confused with child abuse by parents. Child-to-parent violence has been popularized in the recent scientific literature. However, due to types of behaviors that its definition includes (psychological, emotional, or financial abuse), the term should be designated as aggression or abuse rather than violence. Results of the search indicate that the most used terms are: child-to-parent violence and parent abuse. However, the use of child-to-parent violence does not seem adequate because physical and psychological aggressions are integrated in this context. Violence is an act of physical force that causes or is intended to cause harm, whereas aggression is a hostile behavior that may be physical, verbal, or passive. Abuse is defined

TABLE 2 | Descriptors in the selected published papers and search results in Web of Science and Google Scholar.

Number	Descriptors/levels	Web of science in topic	Google scholar
1.	"Child-to-parent violence"	99	1,080
2.	"Parent abuse"	69	2,320
3.	"Violence against parents"	21	633
4.	"Child-to-parent aggression"	19	256
5.	"Adolescent-to-parent violence"	17	458
6.	"Mother abuse"	12	1,090
7.	"Child-to-mother violence"	11	225
8.	"Child-to-parent abuse"	9	149
9.	"Adolescent family violence"	8	116
10.	"Adolescent violence in the home"	6	170
11.	"Parent-directed aggression"	6	57
12.	"Adolescent violence toward parents"	5	411
13.	"Battered parent"	5	383
14.	"Child-to-father violence"	5	25
15.	"Aggression toward mothers"	4	302
16.	"Violence by children against mothers"	1	266
17.	"Aggression toward fathers"	1	158
18.	"Abuse toward mothers"	1	114
19.	"Child-initiated family violence"	1	108
20.	"Adolescent-initiated parent abuse"	1	90
21.	"Teenage violence toward parents"	1	82
22.	"Youth violence toward parents"	1	53
23.	"Parents abused by their children"	1	32
24.	"Youth-to-parent aggression"	1	28
25.	"Youth violence in the home"	1	28
26.	"Filioparental violence"	1	23
27.	"Child-to-mother aggression"	1	9
28.	"Adolescent-parent abuse"	1	7
29.	"Child-to-father aggression"	1	4
30.	"Juvenile domestic violence"	0	101
31.	"Adolescent aggression toward parents"	0	59
32.	"Parents victimized by their children"	0	36
33.	"Violence by children against parents"	0	30
34.	"Adolescent-to-parent aggression"	0	27
35.	"Youth-to-parent violence"	0	24
36.	"Abuse of parents by their adolescent"	0	23
37.	"Youth-to-parent abuse"	0	12
38.	"Parents abused by children"	0	8
39.	"Youth aggression toward parents"	0	5
40.	"Adolescent abuse toward parents"	0	4
41.	"Violence by children toward parents"	0	4
42.	"Violence by adolescents toward parents"	0	4
43.	"Teen violence toward mothers"	0	2
44.	"Violence by child to parent"	0	1
45.	"Violence by adolescent to parent"	0	1
46.	"Aggression by child to parent"	0	1

as any action involving physical violence or emotional cruelty that intentionally harms or injures another person. In abusive behavior there is usually an abuser and a victim, but there are no clear cut-off points to consider a child abusive rather than just aggressive (Gallagher, 2008).

The term child-initiated family violence (Peek et al., 1985) and adolescent-initiated parent abuse (Hong et al., 2012) are singular because they point out that the child initiates the abuse toward parents. Although child-to-parent abuse is frequently used in the scientific literature, when the perpetrators of this type of violence are young adults, it is not an appropriate term. In this review, the proposed term to use in the future is *youth-to-parent aggression* because adolescents and young adults are included, and the term aggression integrates minor aggression and severe maltreatment. Additionally, it would not be appropriate to generalize the findings of early childhood aggression toward parents to older children's aggression because of differences in the developmental period and parenting (Simmons et al., 2018), as well as in the legal consequences for children and parents, or the harm caused. Thus, it could become a new line of research, using the term *child-to-parent aggression* when the children are younger 12 years to investigate early aggressive behavior of children. Moreover, it would be interesting to study the aggressive behavior of adult children toward their parents.

CONCEPTUALIZATION OF YOUTH-TO-PARENT AGGRESSION

The inconsistency of the YPA definitions is one of the major gaps in developing scientific knowledge (Simmons et al., 2018). The first definitions of YPA appear in the scientific literature referring to the battered parent syndrome to illustrate the effects of parent abuse by children (Sears et al., 1957; Harbin and Madden, 1979). According to Bobic (2002), most definitions of YPA are derived from domestic violence terminology due to the similarities in the power issues and the tactics used. In **Table 3**, different definitions of YPA and their characteristics are shown. Harbin and Madden (1979) defined youth-to-parent violence as a type of family violence perpetrated by adolescents and young adults. However, in other definitions, the terms child under age 18 (Calvete et al., 2015a), teenage child (Cottrell, 2001), or adolescent child (Cottrell and Monk, 2004) are specified, but in other definitions, the perpetrator's age or his o her development stage is not mentioned (Paterson et al., 2002; Aroca-Montolío et al., 2014; Pereira et al., 2017). Variations in children's age to define the target population could limit the generalizations of the extent of this family abuse. There is little research which includes perpetrators over 18 years, legally considered adults (Edenborough et al., 2011; Gámez-Guadix and Calvete, 2012; Simmons et al., 2019a,b; Ibabe et al., 2020), even though at least a half of the children in the 18–24 years age range continue living with their parents according to data of different countries (Simmons et al., 2018). The cohabitation between perpetrator and target should be an inclusion criterion in the YPA definition more relevant than applying an arbitrary age-based criterion. Unfortunately, YPA does not disappear when children reach adulthood, and legal consequences for adult perpetrators of YPA could be more serious than for child perpetrators. In any case, it would be interesting to research adult children's abuse toward their parents.

TABLE 3 | Definitions of YPA and their characteristics.

Studies	Definitions	Characteristics
Aroca-Montolío et al., 2014	Intentional and conscious behavior of children with the desire to cause harm, prejudice, or suffering to their parents, repeatedly, and with the immediate aim of gaining power, control, and domination over their parents to get what they want through psychological, economic, or physical violence	Repeated behavior Intentionally Consciously Power and control Economic violence
Brule, 2007	Repetitive verbal, physical, and emotional harm inflicted by 11 to 17-year-old adolescents toward parent/s legally and socially responsible for their abuser	Repetitive behavior Adolescents
Calvete et al., 2015a	Behavior perpetrated by a child under age 18 intended to cause physical, psychological, or financial harm to their parent or guardian	Child under age 18 Financial harm Guardians as victims
Clarke et al., 2017	A persistent pattern of abuse that enables young people to assert power and control over their parents	Persistent pattern of behavior Abuse Young people
Cottrell and Monk, 2004	Any action by adolescents aimed at causing economic, psychological, or physical harm to parents and/or persons occupying their place	Adolescents Economic harm
Cottrell, 2001	Any harmful act (physical, psychological, or financial) by a teenage child that is intended to gain power and control over a parent	Teenage Financial harm Power and control Intentionally
Harbin and Madden, 1979	It is a subtype of family violence with both physical assault and serious threats of physical harm by children and young people	Children and young people
Holt, 2011	Physical, psychological or financial damage caused by an older child to a parent with the intention of controlling the relationship	Older child Controlling the relationship
Holt, 2016	Abusive behavior perpetrated toward a parent by a son or daughter who is legally recognized as a child, and who is usually still living in the family home	Child or legally recognized as a child Living in the family home
Howard and Rottem, 2008	Adolescent violence toward parents takes diverse forms: physical violence, destruction of property and/or possessions, threats and intimidation, psychological, emotional and social abuse, financial abuse and sometimes sexual abuse	Destruction of property and/or possessions Financial abuse Sexual abuse
Miles and Condry, 2015	It is a continuum of behavior ranging from teenagers verbally abusing and using threats of violence toward their parents to damaging parental property and physically assaulting them	Continuum verbal abuse-threats - property damage - physical assault Teenager
Paterson et al., 2002	Any act perpetrated by a child that makes their father/mother feel threatened, intimidated, and controlled	Parents feel threatened and controlled
Pereira et al., 2017	Repeated behavior of physical, psychological, or economic aggression, directed toward the parents or the people who occupy their place, excluding aggressions with a state of diminished consciousness	Repeated behavior Intentionally Consciously Economic violence Guardians as victims

Intentionality or the consciousness of harm to parents should be a condition for considering youth-parent aggression, as some authors have suggested (Cottrell, 2001; Aroca-Montolío et al., 2014; Pereira et al., 2017). Thus, those cases in which there is a transitory or permanent lack of conscience (general sense of right and wrong and feeling of guilt because the person knows they have done something wrong) should be excluded. The state of diminished consciousness can be due to serious mental illness, substance intoxication or mental deficiency. Moreover, another condition for YPA to be considered is that the episodes of aggressive behavior toward parents are repeated, as specified in two definitions (Aroca-Montolío et al., 2014; Pereira et al., 2017). Thus, isolated aggressive behavior by children should be excluded. In normal development, adolescents make every effort to individuate from their parents, and young people could become defiant (Kennair and Mellor, 2007), but defiance does not imply abuse. Some authors consider that there is YPA when children attempt to achieve control and power over a parent (Cottrell, 2001; Paterson et al., 2002; Aroca-Montolío et al., 2014), but parricide (killing one's parents) should be excluded. Abusive behavior is coercive and is perpetrated against someone less powerful (Gallagher, 2004). Can children abuse their parents, when objectively parents have far more power? According to Gallagher (2004), children are abusive when their behavioral pattern is aimed at controlling or disempowering the parent. Nevertheless, all children who batter or even injure a parent are violent, but are not necessarily abusive (e.g., self-defense, outbursts of anger, aggression by a severely disabled child, or aggression by drug-affected or psychiatrically disturbed children). Therefore, the characteristic of power and control will not be an essential condition for YPA, but this idea will be developed in the YPA typologies section.

Some definitions point out that the victims can be the parents or those who exercise their function (Calvete et al., 2015a; Pereira et al., 2017). Moreover, the perpetrator of YPA could be a biological child or an adopted child (Holt, 2016).

The characteristic of cohabitation was also mentioned (child perpetrator typically still residing in the family home) (Holt, 2016). Concerning the nature of behaviors that are thought to compose YPA, there is considerable variability in the severity of assaults or damage caused, ranging from verbal aggression (e.g., yelling at parents) to severe physical aggression (e.g., using a knife on parents), and for such assaults, a child can be incarcerated. The full range of aggression (physical, emotional, psychological, and financial) is included in YPA. These categories could overlap. Physical violence is not conceived without emotional violence, given the fear or perception of helplessness on the part of the victim. Financial aggression has been mentioned in most definitions (Cottrell, 2001; Aroca-Montolío et al., 2014; Calvete et al., 2015a; Pereira et al., 2017), and has sometimes been included as a component of psychological aggression (Calvete et al., 2013a), but on other occasions it is assessed as a concept in itself (Ibabe, 2014; Ibabe et al., 2014) or as a part of coercive behavior (Simmons et al., 2019b). Child-to-parent sexual aggression has been taken into account in two studies (Howard and Rottem, 2008; del Moral et al., 2015). Some social services professionals highlight the existence of sexual violence as a kind of YPA (del Moral et al., 2015). In official complaints, the sexual abuse perpetrated by the children may be concealed by their parents, perhaps due to feelings of shame and guilt, and to safeguard the image of the family itself. However, taking into account that, in the definition of interpersonal violence, sexual harm is mentioned specifically (World Health Organization, 2020), it is questionable that sexual violence does not appear in YPA definitions. Perhaps sexual YPA is unlikely, but has this type of violence been analyzed? Therefore, this type of violence should not be ruled out because of a lack of empirical evidence in previous studies of youth who perpetrated YPA. It is important to take into account that sexual abuse by children was found in children who perpetrate YPA (Sheehan, 1997; Cottrell and Monk, 2004).

To conclude this section, we underline that the definition of YPA should include eight characteristics: (a) repeated aggression, (b) consciously, (c) intentionality, (d) the perpetrator is a youth, (e) the victim is a parent or caregiver, (f) the child is biological or adopted, (g) the child usually lives in the family home, and (h) physical and non-physical aggression. The full definition proposed in this study for YPA is: Young people/children who consciously direct physical, psychological, emotional, financial, or sexual aggression toward one parent or caregiver, repeatedly over time, when the perpetrator and the victim habitually live together. Consequently, the following cases should be excluded from this definition: children younger than 12 years, isolated incidents of child-to-parent aggression, when the children do not habitually live in the family home, when there is no consciousness of the damage caused to their parents (severely disabled children, psychiatrically disturbed children, or drug dependence), parricide, aggressions toward siblings, grandparents, or other members of the extended family. Aroca-Montolío et al. (2014) indicated that the immediate aim of YPA is to gain power, control, and dominance over the parents, and Paterson et al. (2002) defined YPA as any act perpetrated by children that makes their parents feel threatened, intimidated, and controlled. If YPA is constructed as an abuse of power, developing appropriate intervention strategies to empower parents to restore control over their situations will be required. Nevertheless, the characteristics of power, control, and dominance have not been added to the full definition. As explained below, there are different typologies of YPA, and this characteristic is not present in all.

TYPOLOGIES OF YPA

Traditionally, instruments that assess the perpetration of violent behavior have been criticized because they do not take into account the context or reasons that motivate this behavior (Calvete et al., 2007). Some studies analyzed the most frequent reasons for YPA attacks (Calvete and Orue, 2016; Contreras et al., 2019). Calvete and Orue (2016) found that the most frequent reasons for YPA in Spanish adolescents between 14 and 18 years are divided into three groups: instrumental motives (to obtain a benefit by the adolescent), affective motives (emotional experience of anger and other experiences such as feeling misunderstood by parents), and defensive motives (self-defense and defending other people). However, in a Spanish sample with adolescents (12–18 years), Contreras et al. (2019) found two factors related to the reasons for YPA: instrumental and reactive aggression.

In intimate partner violence situation, aggression that partner violent men perpetrate can be explained by the need to control the partner or by emotional reactivity (Ross and Babcock, 2009). Johnson (2008, 2011) established four typologies as a function of the coercive control, severity, frequency, and physical harm of the assaults (intimate terrorism, violent resistance, mutual violent control, and situational violence). YPA abusers constitute a heterogeneous group (Contreras and Cano, 2014), and taking into account the above-mentioned points of view, four typologies of YPA can be distinguished depending on the coercion level and directionality of the violence, with the child as perpetrator: offensive (abusive/instrumental), defensive, affective, and situational (conflictive parent-children relationship). In the proposed typologies, there are specific psychological perpetrator profiles and intervention needs. Moreover, it would be interesting to recognize the dyadic nature of YPA with two mutually exclusive categories: unidirectional youth-to-parent (a youth is a perpetrator and a parent is a victim) and bidirectional (a youth is a perpetrator and a victim at the same time).

Offensive YPA

This typology of YPA includes unidirectional child-to-parent abuse and is similar to the intimate terrorism described by Johnson (2008) as a systematic and controlling abuse pattern of male-perpetrated gender violence. In this case, youth/children exercise coercive control or emotional violence toward their parents. Parents in a YPA situation live under a constant threat. In a qualitative study on parents who are experiencing YPA, one mother briefly described the situation: "my son is now the terrorist in my home" (Holt, 2013). Children have the intention to obtain power and control over a parent, and most

of the definitions of YPA mention this characteristic (Cottrell, 2001; Paterson et al., 2002). This is not a spontaneous child behavior but instead implies premeditation and manipulation by the child. This type of YPA is characterized by proactive aggression, also called instrumental aggression, which means the perpetrator's behavior is planned, predatory, and cold-blooded (Ramírez and Andreu, 2006) and is perpetrated in the absence of anger (Merk et al., 2005). This point of view is consistent with the instrumentality that has been often described by professionals involved with youth performing aggressive behavior toward their parents (Howard et al., 2010). In these cases, interventions should help the affected families to empower parents to control their children's behavior.

Some authors indicate that the instrumental role of YPA is related to permissive parenting and lack of limits for children as well as to the culture of consumption in current Western societies (Calvete et al., 2013b). "Youth entitlement" is consistent with proactive aggression (Howard et al., 2010), because young people feel it is their right to exert controlling and aggressive behavior to gain whatever they desire. In this context, YPA may represent a way to get aims when the parents decline to carry on satisfying the children's desires. This typology has some similarities with intimate terrorism concerning abusive power and control over the victim, but the main difference is the power balance: equal power for intimate partner relationships and unequal power for YPA. Generally, people with Antisocial Personality Disorder (ASPD) have positive views of violence and tend to consider their couples as objects to be controlled (Ross and Babcock, 2009). They are also described by their manipulation of others for personal achievement, as well as by their constant disrespect and abuse to others (American Psychiatric Association, 2000). An antisocial profile in children has also been found in YPA studies (Ibabe, 2014; Ibabe et al., 2014).

Knowledge about intimate terrorism applied to YPA indicates that the cases reported by the parents or families who ask for help in mental health services for this problem are the more serious cases. Moreover, gender asymmetry of the perpetrator and the victim appears in these cases, sons are the most frequent perpetrators while mothers are the most frequent victims. In addition, children may use strategies based on control and manipulation to gain power over their parents. In the first definitions of YPA, the goal to achieve power and control over parents was present. In this situation, parents would lose authority and would worry about their safety and that of their family.

Defensive YPA

When aggression is a direct answer to an assault or is mainly proposed to avoid another assault toward oneself or another, it is considered defensive. This type of violence is bidirectional because the young person involved has direct or indirect experience of victimization, and it is related to violent resistance. Defensive YPA would include violent behavior for self-defense if the child has experienced parent-to-child abuse (including aggressive discipline and neglect) or for defending another person in interparental violence situations. Some adolescents or young adults who perpetrate YPA were abused or neglected by their parents, and, in particular, they experienced their father's application of physical punishment (Browne and Hamilton, 1998; Calvete et al., 2015b; Ibabe and Bentler, 2016; Ibabe, 2019) or were exposed to interparental violence (McCloskey and Lichter, 2003; Boxer et al., 2009; Ibabe and Jaureguizar, 2011; Gallego et al., 2019; Ibabe et al., 2020). Some young people intervene to avoid intimate partner abuse against their mothers (Gallagher, 2008). When children witness gender violence, they may defend their mother and direct their aggression toward their father. Browne and Hamilton (1998) found that 80% of physical YPA happened in the context of child abuse. All of these results strongly suggest a reciprocal relationship between child abuse and YPA, however it is necessary to get evidence about reciprocal effects (immediate or close in time) that may also explain this relationship (Gallego et al., 2019). Family violence exposure can have an effect on YPA through social information processing (Simmons et al., 2018). For example, experiencing violence was associated with more negative perceptions and expectations of social relationships (Contreras and Cano, 2016). In defensive YPA situations, family intervention would have to include intervention with parents to reduce aggressive discipline or neglectful practices.

Affective YPA

Affective aggression is described as being impulsive, spontaneous, hostile, affective, and hot-blooded (Ramírez and Andreu, 2006), and occurs in reaction to a supposed threat and in the presence of intense rage (Dodge and Coie, 1987). Children were often described by their parents as having "anger issues" and not being able to cope and or control themselves (Holt, 2013). There is even an inclination to think that most YPA is affective (expressive) rather than controlling, particularly when the children have suffered trauma in early childhood (Gallagher, 2008). Some psychological disorders, psychological distress, or substance use of young people may be the cause of conflicts between parents and children. This typology of YPA is unidirectional violence; at least, there is no parent-to-child abuse or interparental abuse. Although the parents may use violence to defend themselves, the authorities (childhood and family services, domestic violence, police, and courts) may rigorously penalize any such defensive violence by the parents and unconsciously absolve the aggressive children in morally ambiguous situations (Gallagher, 2008).

Concerning mental health, Borderline Personality Disorder is distinguished by emotion dysregulation, profound fear of abandonment, difficulty controlling anger, and unstable interpersonal relationships (American Psychiatric Association, 2000). Perpetrators with this disorder may perpetrate physical violence against their parents when they become distressed as a way of regulating negative feelings, similar to intimate partner abuse situations (Keltner and Kring, 1998). Problem drug use frequently produces negative effects both for drug users themselves and for their family members (Orford et al., 2013). Drug use and YPA are positively associated according to a vast majority of studies in a clinical context (Routt and Anderson, 2011; Contreras and Cano, 2014; Ibabe et al., 2014) and community population (Simmons et al., 2018). Drug problems may be associated with an antisocial profile (Ibabe,

2014; Simmons et al., 2018), including property damage in the parent's home or personal belongings of parents (Margolin and Baucom, 2014) or financial abuse (Ibabe et al., 2014). In affective YPA, interventions centered on anger management and development of social skills in young people (Brown and Parsons, 1998), treatment of substance use problems or dependence, as well as training of parents in strategies of positive communication with their children would be recommended (Calvete and Orue, 2016).

Situational YPA

Situational violence could occur in parent-child relationships, although this has not been studied empirically. This type of violence is of low intensity, and often the consequence of a situational conflict rather than a tool for controlling or self-defense. It involves a minor form of bidirectional violence without the abuse of power by parents or children, but with conflictive parent-child relationships. Situational YPA is due to the inability to cope in conflictive situations. Some conflictive context turns into an argument that turns into verbal aggression and, eventually, physical violence. This means that both parents and children keep losing their control during an argument, and this may lead to increased occurrences of violence. Parents and children may be unskilled at arguing, listening to each other, or are not sufficiently socially skilled, and lose control over themselves. If they are frequently confronted with this type of violence, a feeling of inability to cope with these specific situations may develop.

Although this typology of YPA is different from abusive YPA, it still has great potential to hurt family members and their relationships. This type of violence could be the most common form of YPA. When this type of pattern occurs, arguments escalate to minor violence. Disputes can progress to yelling or insults, then to actions like throwing belongings or pushing each other (Johnson and Leone, 2005). Families experiencing situational violence can be helped by early intervention for YPA situations (Ibabe et al., 2018) carried out by trained mental health professionals, in which they learn effective conflict-resolution and communication skills strategies. It is important to indicate that in a small number of families there is serious reciprocal abuse, where adolescents may have fights with their fathers but be abusive and controlling toward their mothers (Gallagher, 2008).

ASSESSMENT OF YPA

It is essential to obtain an instrument to measure a varied range of YPA behaviors, integrating all of the elements included in the conceptualization. Below, the most frequently used instruments to assess YPA are described with psychometric studies when available (**Table 4**).

Conflict Tactics Scale (CTS; Straus, 1979; CTS-PC; Straus et al., 1998)

This scale is the most widely utilized instrument to measure aggressive behavior among all family members. The CTS is designed to get data on all possible dyads among family members, and it measures physical aggression, psychological aggression and injury during the previous year. It has been adapted to measure physical and verbal aggression against parents (Calvete et al., 2011; Gámez-Guadix and Calvete, 2012; Beckmann et al., 2017). Gámez-Guadix and Calvete (2012) applied the CTSCP with 6 items proposed for the International Parenting Study to assess YPA. These items are originally from the CTSPC (Conflict Tactics Scales—Parent-Child) (Straus et al., 1998), in which the goal was to improve the scales to measure parent-child conflicts. Three items indicate verbal aggression (cursing, yelling, and threatening to beat up the parents), while the other three indicate physical aggression (slapping, kicking, and hitting with an object that may cause damage), in relation to the last 6 months, using a scale from 0 (*Never*) to 2 (*Often*). Although in original studies this scale was administrated to children from 3 to 25 years of community sample, in some studies it has also been applied to graduate students (18–25 years) (Gámez-Guadix and Calvete, 2012).

Abused Parent Questionnaire (APQ; Ghanizadeh and Jafari, 2010)

This instrument measures four types of abuse: physical (e.g., your child's hitting you), psychological, verbal, and financial abuse. The parents and their children give information concerning the frequency of the executed behaviors by children during family conflicts in the preceding 2 months. The response categories ranged from 0 (*Never*) to 6 (*More than 20 times*). Three types of abuse (physical-financial, psychological, and verbal) were found in an exploratory factor analysis. This scale was administrated to children of 3–25 years from clinical population.

Intra-Family Violence Scale (IVS; Ibabe and Jaureguizar, 2011; Ibabe et al., 2014)

This instrument includes a child-to-parent abuse subscale that measures physical ("During quarrels with my father/mother, I have pushed or hit him/her"), psychological ("I insult or threaten my father/mother when I get angry for any reason"), and emotional abuse ("I blackmail my father to get what I want") toward parents with 3 parallel items (father/mother) with a 5-point Likert scale (1 = *Never,* 5 = *Many times*). The three-factor structure was obtained by exploratory and confirmatory factor analysis (Ibabe and Jaureguizar, 2011; Ibabe et al., 2014). Moreover, the difference between psychological and emotional abuse is theoretically supported by some studies (Cottrell, 2001; Kennair and Mellor, 2007; Howard and Rottem, 2008). The internal consistency of the three subscales was adequate ($\alpha > 0.70$). The subscale has an item to measure financial abuse ("I steal money or things from my parents"). This scale was administrated to adolescents of 12–18 years from community and clinical population.

Child-to-Mother Violence Scale (CVS; Edenborough et al., 2011)

This scale explores respondents' experiences of child-to-mother violence with 12 items (e.g., Making her [the mother] think she was crazy), and with four response options for each

TABLE 4 | Instruments to assess YPA with available psychometric studies.

Instrument/study	Type of sample, sample size, age, and country	Dimensions	Number of items/ Reporting period	Psychometric properties	TSR/Cat
1. Violent behavior questionnaire (Paterson et al., 2002)	Clinical population Intervention group for mothers (n = 14) Australia	Physical verbal Socio-emotional life threats	22 descriptors	Face validity for each item	?C
2. Adolescents' parent-directed aggression (Margolin and Baucom, 2014)	Community population 112 parents with a child aged 9–10 years California	Physical aggression property damage verbal aggression	14 items	α = 0.54–0.75	?C
3. CTS for YPA (Calvete et al., 2011)	Community sample: 1,427 12–17 years Spain	Physical Verbal	6 parallel items Previous 12 months	α = 0.66 α = 0.88	++B
(Gámez-Guadix and Calvete, 2012)	University students: 1,861 participants Spain	Physical Psychological	6 parallel items Previous 12 months	α = 0.74 α = 0.79	
(Lyons et al., 2015)	University students: 365 participants Canada	Child-to-mother verbal Child-to-father verbal	6 items When children were 10 years old	α = 0.64 α = 0.65	
(Beckmann, 2020)	3,548 adolescents Germany 9th grade students	Physical Psychological	4 parallel items Previous 12 months	α = 0.67 α = 0.76 EFA One factor	
4. APQ (Ghanizadeh and Jafari, 2010)	Clinical sample: 74 children 5–14 years Iran	Physical-financial Psychological Verbal	27 items Previous 2 months	EFA KMO = 0.75 Varimax Three-factor solution: 51.8% variance α = 0.78–0.93	+++B
(Fawzi et al., 2013)	Clinical sample: 150 children 13–19 years Egypt	"	"	Concurrent validity r = 0.85 α = 0.77–0.90	
5. IVS (Ibabe and Jaureguizar, 2011)	Community sample: 485 adolescents 12–18 years Spain	Physical Psychological Emotional	9 items Previous 12 months	EFA Three-factor solution, 63% variance CFA: First (intra-family violence) and Second order latent factor (physical, psychological and emotional), CFI = 0.95, IFI = 0.95, NNFI = 0.94, RMSEA = 0.054 Overall α = 0.80	+++B
(Ibabe et al., 2014)	Clinical sample: 106 adolescents Community sample: 125 adolescents 14–18 years Spain	Physical Psychological Emotional Financial [a]	7 items Previous 12 months	Principal Component Analysis, 88% variance, Three factor solution α = 0.85–0.88	
6. CVS (Edenborough et al., 2011)	Community sample 10–24 years Pilot study: 129 mothers Study: 1,024 mothers Australia	Child-to-mother violence	24 items Previous 12 months	EFA: ML Unidimensional α:0.98–0.99 Test-retest reliability ICC:0.97	+++B
7. Risk assessment (CPVR) (Loinaz and Sousa, 2020)	Clinical (60) and judicial (31) contexts Spain 91 participants 13–28 years	Type of violence Psychological profile of the aggressor Social adaptation of the aggressor Family factors	24 risk factors 6 protective factors	Test-retest > 0.90 Inter-rater > 0.90 Judicial and clinical contexts (AUC = 0.83) Injuries to the mother (AUC = 0.76) 69% high risk -judicial context- 81% low risk -clinical context-	+++B

(Continued)

TABLE 4 | Continued

Instrument/study	Type of sample, sample size age and country	Dimensions	Number of items/ reporting period	Psychometric properties	TSR/Cat
8. Parent abuse scale (Girl-mother version) (Abbaspour et al., 2019)	Community population 188 high school's mothers Iran	Emotional abuse Physical abuse	15 items	EFA KMO = 0.89 Two factors CFA: two-factor solution: CFI = 0.97, GFI = 0.91, RMSEA = 0.07 α = 0.75–0.93	+++B
9. CPAQ (Calvete et al., 2013a)	Community sample: 2,719 adolescents 13–18 years Spain	Physical Psychological	10 parallel items Previous 12 months	CFA CFA: Two-factor solution, CFI = 0.99, RMSEA = 0.048 α = 0.73–0.76	++++B
(Calvete et al., 2017)	Community sample: 880 adolescents and 880 parents 13–19 years Spain	Physical adolescents Physical parents Psychological adolescents Psychological parents	10 parallel items –adolescents- 10 items –parents- Previous 12 months	CFA Four-factor solution: CFI = 0.99, RMSEA = 0.06 α = 0.55–0.83 adolescents α = 0.56–0.86 parents	
(Del Hoyo-Bilbao et al., 2018)	Clinical sample 169 12–24 year old Spain	Physical v father Physical v mother Psychological father Psychological mother	10 parallel items Previous 12 months	CFA Four-factor solution: NNFI = 0.981, CFI = 0.985, RMSEA = 0.068 α = 0.79–0.84	
(Calvete and Veytia, 2017)	1,417 adolescents 14–19 years old México	Physical v father Physical v mother Psychological father Psychological mother	10 parallel items Previous 12 months	CFA Four-factor solution: NNFI = 0.989, CFI = 0.991, RMSEA = 0.067 α = 0.83–0.89	
10. ABC-I (Simmons et al., 2019a)	Community sample 14–25 years Study 1: 374 parents Study 2: 587 children Australia	Verbal aggression Physical aggression Coercive behavior	9 parallel items Previous 12 months Score $\geq$ 16 abusive	Principal Component Analysis KMO = 0.78; three-factor solution, 72% variance Criterion validity: parents' judgments (r = 0.22–0.53) PLS-SEM Convergent validity: mothers (ρ = 0.47) and fathers (ρ = 0.51) ROC analysis: Sensitivity = 0.82; Specificity = 0.83	++++B
11. CPV-Q (Contreras et al., 2019)	Community sample: 1,386 adolescents 12–18 years Spain	Psychological Physical Financial Control/domain	14 parallel items Previous 12 months	EFA KMO = 0.88 Four-factor solution: 41% variance CFA: Four-factor solution, CFI = 0.97, TLI = 0.96, RMSEA = 0.04–0.05 α = 0.70–0.88	+++++B
(Jiménez-García et al., 2020)	823 university students 18–25 years Chile	Psychological Physical Financial Control/domain	19 parallel items Period 12–17 years	CFA Four-factor solution (mothers/fathers): CFI = 0.94–0.96, TLI = 0.93–0.95, RMSEA = 0.02–0.04 α = 0.71–0.83 Convergent validity with support and affection	

[a]*An item was added to the original scale for assessing "financial violence" ("I steal money or things from my parents"); EFA, Exploratory Factor Analysis; CFA, Confirmatory Factor Analysis; +, sufficient; ?, indeterminate; TSR, Total sufficient rating; Cat., Categories for recommendations on suitable instruments (Prinsen et al., 2018); B, Instrument in need of further validation, may be used with precaution (Prinsen et al., 2018).*

item (*Never*, *Occasionally*, *Most weeks*, and *Daily*). There are additional questions about the mother's actions following the abuse, and support networks. A maximum likelihood factor analysis supported a single underlying construct. This scale was administrated to children of 10–24 years from a community population.

Child-to-Parent Violence Risk Assessment (CPVR; Loinaz and Sousa, 2020)

This risk assessment tool was elaborated according to international quality standards (Douglas et al., 2014). The instrument is comprised of 24 risk factors categorized into four dimensions (type of violence, psychological characteristics of the perpetrator, adaptation of the perpetrator, and family factors), and six protective factors. Each risk factor can be present, partially present, or absent for the present time (during the last year) and for the past. Furthermore, this instrument contains more than 20 possible risk factors (i.e., single-parent family, adoption, academic situation, immigration, parent's criminal histories, and so on). The best results in prediction of low and high risk was for injuries to mother with a cut-off score situated between 22 and 23.

Adolescent Child-to-Parent Aggression Questionnaire (CPAQ; Calvete et al., 2013a)

This instrument has 10 parallel items (father/mother) to assess psychological (7 items; e.g., "You have blackmailed your mother/father to get what you wanted") and physical aggression (3 items; e.g., "You have pushed or hit your mother/father in a fight") during the past year. The answer format was based on a 4-point Likert scale (0 = *Never,* 3 = *Six or more times*). Severe physical aggression is considered if physical aggression has occurred at least *three times in the last year*, while severe psychological aggression is considered if psychological aggression has occurred at least *six times in the past year*. This instrument also consists of a measurement of the reasons for the aggression (e.g., "If you indicated that you hit your father or your mother in one of the preceding questions, please state the reasons for this"). The authors specified that this instrument could be useful as a screening tool to evaluate the presence of YPA or as a measure to study effectiveness of an intervention. This scale was administrated to children of 13–18 years from a community population.

Abusive Behavior by Children-Indices (ABC-I; Simmons et al., 2019a)

This instrument was created to differentiate normative behavior toward parents from YPA, taking into account the frequency and severity of the behavior. It has 9 behavior descriptors rated by frequency on a 6-point Likert-type scale (1 = *Never,* 6 = *Daily*) over 12 months with three factors: Physical Aggression (3 items), Verbal Aggression (2 items), and Coercive Behavior (4 items; e.g., "Stole money or possessions from parents," "Threatened to hurt myself or others if the parent did not do what the child wanted"). Participants who get 16 scores or greater are categorized as abusive. The ABC-I scoring system differs by item, based on parents' perceptions to be considered abusive depending on the frequency (e.g., "Shouted or swore at a parent"; Daily = 16 scores) (Instructions for administering see Simmons et al., 2019b). This instrument can be used with adolescents and young adults aged 14–25 years and their parents but should be administered together with the BACPAQ (Beliefs About Child-to-Parent Abuse Questionnaire) to assess perceptions of conflict between a child and a parent (Simmons et al., 2019b). They found that the parents perceived any physical aggression, psychological coercion or intimidation, and financial abuse to be abusive behavior if they happened a few times a year, whereas verbal aggression had to occur daily. Simmons et al. (2019a) studied what Australian parents considered abusive YPA, and future studies should confirm whether abusive behavior in the YPA context varies across cultures.

Child-to-Parent Violence Questionnaire (CPV-Q; Contreras et al., 2019)

This questionnaire consists of 14 parallel items (father/mother) with four factors: Psychological (4 items), Physical (3 items), and Financial Abuse (3 items), as well as the Control and Domain dimension (4 items) (e.g., "I have told my parents that at home, they have to do what I want"). Adolescents are asked to specify how often they have perpetrated each of the behaviors against their parents in the past year using a 4-point Likert-type scale (0 = *Never,* 1 = *Rarely - it has occurred once,* 2 = *Sometimes - 2 or 3 times,* 3 = *Many times - 4 or 5 times,* 4 = *Very often - 6 times or more*). Some authors indicate that control and domain over a parent is a key aspect of YPA (Cottrell, 2001; Molla-Esparza and Aroca-Montolío, 2018). This scale was administrated to children of 12–18 years from a community population.

CRITICAL ASPECTS OF INSTRUMENTS

All YPA assessment instruments show evidence on a two-factor model (physical and psychological aggression) except CVS, which is unidimensional (Edenborough et al., 2011). Although the CTS (Straus, 1979) were originally administered as a measure for various forms of family violence, the CTS-2 has specific items of intimate partner violence. Even though the CTS were applied to measure verbal and physical aggression against parents, did not include a dimension such as financial abuse or emotional abuse (control or coercive behavior). This instrument takes into account the frequency of the behavior rather than its severity, but YPA-specific instruments (e.g., ABC-I) have developed to assess potential abusive behavior.

The scientific literature shows some problems associated with a lack of consensus about the definition of YPA and the operationalization of some types of aggressive behavior. For instance, in some instruments financial abuse has been assessed as a dimension on its own (Ibabe et al., 2014; Contreras et al., 2019), in other instruments as an element of a physical-financial abuse factor (Ghanizadeh and Jafari, 2010), as psychological abuse (Calvete et al., 2013a), or as coercive behavior (Simmons et al., 2019b). This issue can be complex if it takes into account that psychological and emotional forms of abuse facilitate to dominate and exercise control over another person (Tolman, 1992).

Also, it is surprising that the Emotional Violence subscale of the IVS (e.g., "I blackmail my father to get what I want") (Ibabe et al., 2014), the Control and Domain subscale of the CPV-Q

(e.g.," I have told my parents that at home, they have to do what I want") (Contreras et al., 2019), the Coercive Behavior subscale of the ABC-I (e.g., "I have threatened to hurt myself or others if my parents did not do what I wanted") (Simmons et al., 2019b) measure similar constructs. Examples of emotional abuse indicated by Kennair and Mellor (2007) were making the parent think he or she was crazy or employing manipulative threats. Although psychological and emotional abuses are sometimes used synonymously, the difference between psychological abuse and emotional abuse involves controlling and manipulative behavior. The eleven YPA tools used by researchers across different ages (from 10 to 25 years) include preadolescents, adolescents, and young adults. Internal consistency of the CPAQ's subscales is detailed, but it sometimes does not reach the desirable level ($\alpha \geq 0.70$) (Calvete et al., 2015a; Izaguirre and Calvete, 2017). A risk assessment tool for YPA (CPVR, Loinaz and Sousa, 2020) was found, which could be useful to detect the development of violence or for managing the cases depending on risk level. Some of the problems detected in the assessment instruments are related to problems of conceptualization or to a lack of consensus among researchers.

Table 4 shows evidence of the psychometric properties of the eleven instruments, and according to COSMIN guidelines only two instruments (Violent Behavior Questionnaire and Adolescents' parent-directed aggression) fulfilled the criteria for category C and should therefore not be recommended for use. All other instruments were placed in category B, but three instruments (CPV-Q, CPAQ, ABC-I) stand out positively. They may still be recommended, but further validation is needed.

CONCLUSION AND IMPLICATIONS

In the last two decades, scientific interest in YPA has grown exponentially but the theoretical foundation is weak. One of the biggest challenges for YPA is a lack of internationally agreed upon terminology and definitions, which makes it difficult to compare different studies (Moulds et al., 2019). This paper has tried to contribute to the field of YPA by offering a systematic review of the extant literature, describing theoretical and empirical limitations in the conceptualization, and the measures used.

One purpose of this study was to analyze the terms, definitions and typologies used in YPA research. Although in total 46 different terms were found (**Table 2**), the most appropriate term for adolescents and young adults directing their aggressive behavior toward a parent is *youth-to-parent aggression*. However, as in early childhood aggression less harm is caused and the consequences are not as serious, the parental role in this developmental stage is different from that of young people, as are the legal consequences for children and parents. For these reasons, the proposed term for children under 12 who assault their parents is *child-to-parent aggression*. Aggression by young children hardly origins physical injury, although it may cause emotional distress to parents and continues in adolescence and adulthood as dating violence and intimate partner violence (Ulman and Straus, 2003). The word 'abuse' implicitly suggests a person who is an abuser (Holt, 2011). Thus, it may not be appropriate in some cases of YPA, especially when children are under 12 years of age. It is important to differentiate abusive and non-abusive YPA, taking frequency and severity into account. Some studies have measured the relative frequency and severity of YPA situations (Kolko et al., 1996; Gebo, 2007; Calvete et al., 2013a; Simmons et al., 2019a; Ibabe et al., 2020). The presence of physical YPA can be considered abusive, but the presence of a single or infrequent non-physical behavior is not abusive. Specific incidents of aggression are claimed to be part of normative youth behavior, although cases of a continuous pattern of abusive behavior in youth-to-parent relationships would be considered abusive YPA. In other studies, the prevalence rates of interpersonal violence (interparental violence, dating violence, and YPA) have been calculated using the zero tolerance criteria (using violence at any point in the last year) and technical abuse criteria (if the response "sometimes" or more in terms of frequency was stated in response to any item) (Ibabe, 2019; Ibabe et al., 2020). Similarly, Beckmann (2020) also used considered zero tolerance criteria ("once or twice") and the technical abuse criteria ("three times" or more) to calculate YPA prevalence rates. Nevertheless, the youth-to-parent abuse term could be reserved for a diagnosis of abuse using an instrument with adequate psychometric properties as a function of country (Australia, ABC-I, Simmons et al., 2019a; Spain, CPAQ, Calvete et al., 2013a) or any technical abuse criterion. ABC-1 (Simmons et al., 2019a) includes a cut-off score to identify abuse, while CPAQ (Calvete et al., 2013a) considers severe physical aggression if physical aggression has happened at least three times in the previous year, and severe psychological aggression if it has happened at least six times in the same period.

After performing a systematic review of the existing definitions, thirteen definitions are analyzed to establish a full definition of YPA, distinguishing among abusive YPA and non-abusive YPA. Youth-to-parent aggression is defined as aggressive behavior (physical, psychological, emotional, financial, or sexual) by young people toward a parent or caregiver consciously and repeatedly over time, when parents and children usually live together. Youth-to-parent abuse is defined in the same way as YPA, but with young people perpetrating physical aggression or frequent non-physical aggression toward parents. Although to consider youth-to-parent abuse, it would be recommendable to make the diagnosis of abusive YPA using any instrument (CPAQ, Calvete et al., 2013a; ABC-I, Simmons et al., 2019b) or technical abuse criteria (Beckmann, 2020; Ibabe et al., 2020).

YPA and intimate partner violence occur in the context of interpersonal relationships, and they have conceptual similarities concerning the nature of violence (physical, psychological, emotional, economic, or sexual), typologies of YPA (Johnson, 2008), as well as empirical evidence on gender symmetry in intimate partner violence (Straus, 2010), or the profiles of perpetrators and victims of YPA and intimate partner violence. Sometimes financial aggression is considered as psychological aggression (e.g., Calvete et al., 2013a). Two unique features of YPA are the parent's legal responsibility with respect to the child and the need to prioritize the needs of child in any intervention (Holt, 2013). The intentionality to harm the victim and repeated violent behavior are necessary to consider maltreatment (Molla-Esparza and Aroca-Montolío, 2018). Nevertheless, although YPA is not a deliberate and

intentional strategy of children, if they use it as a way of persuading their parents to fulfill their wishes, parents could feel absolutely disorientated and disempowered.

This study has revealed that four typologies of YPA (Offensive, Defensive, Affective, and Situational) could be discriminated as a function of the coercion level and nature or directionality of the violence. Offensive YPA is similar to intimate terrorism (Johnson, 2008), with children exercising coercive control or emotional violence toward their parents and the parents living under constant threat. This typology has some similarities with intimate partner violence regarding power and control over the victim and is characterized by the manipulation of other persons for own advantage. Moreover, it is characterized by proactive aggression, designated as instrumental, deliberated, and scheduled (Ramírez and Andreu, 2006). In any case, the two are deliberate actions directed at reaching a specific goal. Intervention programs should support the involved families to empower the parents and enable them to control their children's behavior. Defensive YPA includes violent behavior for self-defense in child abuse experiences or to defend another person in interparental violence situations. There is considerable empirical data about the association between YPA and physical punishment (Calvete et al., 2015b; Ibabe, 2019) or interparental violence exposure (Boxer et al., 2009; Ibabe and Jaureguizar, 2011; Gallego et al., 2019; Ibabe et al., 2020). It is necessary to intervene with the parents to reduce neglectful practices. Affective YPA is characterized by children with problems controlling themselves, but the parents do not use violence to defend themselves. In these cases, it would be recommendable that interventions focus on anger controlling and social skills deficits in young people (Brown and Parsons, 1998), as well as training parents in positive communication strategies (Calvete and Orue, 2016). Situational YPA is a minor form of bidirectional violence without abusive behavior by parents or children, where parents and children are unskilled in arguing, listening to each other, and not sufficiently socially skilled. Families experiencing situational violence could obtain help from early intervention for YPA situations (Ibabe et al., 2018), learning effective conflict-resolution strategies and communication skills carried out by trained mental health professionals. In the Trait-Based Model (Kuay et al., 2017), the perpetrators of YPA are separated into "generalists" (with high on callous-unemotional features, perpetrate YPA as well as violence outside the family), and "specialists" (with low on callous-unemotional features and specifically YPA). Moulds et al. (2019) found that the majority of YPA offenders are antisocial (e.g., they have other offenses), while that YPA crime in isolation is infrequent.

When YPA is conceptualized as violent incidents without exploring their context in community population and their frequency or severity (e.g., "How often in the past year have you slapped a parent?"), gender symmetry between male and female perpetrators has been reported in numerous studies (Ulman and Straus, 2003; Ibabe and Jaureguizar, 2011). Nevertheless, when cases of YPA involve a greater occurrence and severity of aggression, parents reach a "breaking point" and seek help through the police or other services (Holt, 2013; Howarth and Feder, 2013), and such cases involve sons more often than daughters (Walsh and Krienert, 2007; Ibabe and Jaureguizar, 2010; Condry and Miles, 2014). In the last decade, some agencies traditionally concerned with intimate partner violence or domestic violence have been aiding women abused by their children (Gallagher, 2008). Therefore, the term 'parent' hides the reality that it is most frequently 'mother' who is the victim of such abuse (Holt, 2011). As almost all assessment instruments of YPA have parallel items directed toward father versus mother, it would be interesting to provide data on both youth-to-father aggression and youth-to-mother aggression. It is necessary to point out that sometimes children direct their violent behavior toward both parents, siblings or grand-parents (Ibabe and Jaureguizar, 2010).

Other objectives were to show the psychometric properties of instruments identified in the systematic review to assess YPA, and to identify the best instruments using the COSMIN protocol. **Table 4** shows the eleven instruments found with any information about their psychometric properties. Among these YPA assessment tools, three were identified as the most promising instruments (B category, can be administrated with caution) to be used in the research or clinical context: *Child-to-parent Violence Questionnaire* (CPV-Q, Contreras et al., 2019), *Adolescent Child-to-Parent Aggression Questionnaire* (CPAQ, Calvete et al., 2013a) and *Abusive Behavior by Children-Indices* (ABC-I, Simmons et al., 2019a). In general, it is necessary to conduct more cross-cultural studies, but it would be important to unify the conceptualization of YPA and the age limit. In this context, psycho-emotional aggression could include different types of behavior as ignoring parents, rejection, or non-verbal expressions of contempt (Aroca-Montolío et al., 2014).

YPA is a complex social problem, which currently involves many controversies. For example, criminology presents teenagers as potential delinquents in the public context, but not within the home (Condry and Miles, 2014). The subject of YPA might be a cultural taboo (Edenborough et al., 2008) because it is seen by some people as "unnatural and almost inconceivable," taking into account the supposed authority of parents (Pagani et al., 2004). However, the fact of not understanding a phenomenon like YPA does not mean that it does not exist. Parent victims of YPA are legally obliged to live together with their child offender until they reach the age of majority (Coogan, 2011), a fact that increases parental vulnerability. This vulnerability will be higher when there are children with serious mental illness or with drug abuse. The importance of parental misconduct (from dysfunctional parenting to child abuse) as a causal factor in YPA and parricide has not been central in the academic discourse (Holt and Shon, 2016). Nevertheless, a broader perspective regarding the sources of family conflict is necessary to advance YPA research. If the child-parent conflicts are not managed satisfactorily in adolescence, they will continue in early adulthood, adulthood, and old age.

As a systematic review provides an unbiased assessment of the studies across countries, this is a relevant strength of current study. This type of research can add knowledge to the scientific community especially when there are gaps in the existing conceptualization. However, the community's response to YPA is different depending on the country, which could thus represent a limitation of the current analysis. In general, the

conceptualization of YPA could be different in juvenile justice, child welfare or domestic violence contexts (Hunter et al., 2010) or at least in the social representation of mother as victims and children as perpetrators in different services providers. In any case, this could be an interesting goal for a further study.

In conclusion, it is essential to establish a broad consensus on the definition and measurement of YPA to improve researchers' capacity to effectively build on existing evidence (O'Hara et al., 2017). This implies improving the conceptualization of YPA and measuring this type of abuse consistently, as well as avoiding the arbitrary age-related boundaries of YPA perpetration. Previous literature reviews (Kennair and Mellor, 2007; Hong et al., 2012; Simmons et al., 2018) conclude that results across studies using different definitions of YPA have led to contradictory findings. Operational variables used in the studies do not reflect a theoretical construct. The four typologies of YPA which have been proposed (Offensive, Defensive, Affective, and Situational) can help in the initial psychodiagnosis of a YPA situation and prevent more severe situations of YPA requiring early intervention. There is empirical evidence that supports YPA as the intermediary stage in the intergenerational transmission of violence (Gebo, 2007; Ibabe et al., 2020). Moreover, in a few cases parricide may be the final-stage culminating action for children (Walsh and Krienert, 2009). It is therefore necessary for practitioners, parents, and children alike to identify and name YPA to break the silence concerning this hidden family abuse. It needs to be expressed sincerely in a safe context with joint goals of enhancing communication and building respectful interactions. In our society, children are seen as potential victims and the parents have supremacy of power (Tew and Nixon, 2010). Thus, it could be difficult to understand how parents may become afraid of their own children, but keeping in mind the YPA typologies would help in that understanding of some situations. Future research should integrate the research of aggression in other contexts and investigate what is distinctive to YPA, as well as confirm whether the profile of the perpetrator of intimate partner violence is analogous to the profile of YPA perpetrator. Furthermore, it would be interesting to analyze the extent to which YPA is bidirectional or unidirectional, and the prevalence rate should also be taken into account in this point of view.

AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

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What Goes on in This House Do Not Stay in This House: Family Variables Related to Adolescent-to-Parent Offenses

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Research on adolescent-to-parent violence (APV) associates specific psychosocial characteristics with adolescents who assault their parents, whether they are within or outside the juvenile justice system, or whether these characteristics are shared by other adolescents convicted of other crimes. The aim of this paper is to compare three groups of adolescents. Those who have been sentenced for APV are compared with adolescents who have committed other crimes, and with a group who have not been involved in the justice system. The sample used consists of 148 male participants between the ages of 14 and 21. A comparison is made regarding type of self-reported behavior, frequency of drug use, academic performance, exposure to violence, self-concept, and parents' conflict resolution tactics. The results obtained indicate that adolescents with judicial measures, regardless of the crime committed, differ from those who have not been in trouble with the justice system in terms of them having suffered violence in the street, the frequency with which they use drugs and in their academic achievement. Likewise, adolescents convicted of APV differ from the other two groups in the frequency with which they are victims of violence at home, in that their mothers use the tactic of asking somebody else for help as a way of solving marital conflicts, and in having a more negative family self-concept. The results are discussed highlighting the importance of taking into account whether a sample is judicial, clinical, or community, and the specific APV behaviors which are measured.

Keywords: adolescent-to-parent violence, exposure to violence, marital conflicts solution tactics scale, self-concept, youth offenders

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INTRODUCTION

Adolescent-to-parent violence (APV) is a type of domestic violence with very specific characteristics. It occurs in the intimacy of the home but, unlike violence from parents to children or from men to their intimate partners, it has been the target of much social reproach that has been reflected in the law since the Code of Hammurabi (Calvete and Pereira, 2019a). This reproach has given social and legal support to parents to report their children when they are their victims. However, parents have always been reluctant to do so (Williams et al., 2016). Because parents are legally and morally

responsible for the children who abuse them, they experience conflicting emotions that lead them to blame themselves for what happened and remain silent because of shame (Brule and Eckstein, 2016; Williams et al., 2016). These feelings arise in the context of a parent-blaming culture in which APV is considered a failure of parenting (Holt and Retford, 2013; Holt, 2016).

Even so, in recent years, there has been an increase in the number of police reports made by parents that have brought their children into the juvenile justice and child protection systems in several countries. In Australia, for example, a 71.17% increase in APV reports to the police took place between 2009 and 2013 (Moulds et al., 2018). In Spain, references to the increase in cases of youths being prosecuted for this crime first appeared in 2004 (Calvete and Pereira, 2019a) and in 2019 Spain's General Attorney's Office reflected in its report the concern regarding an increase of 9.98% of these cases between 2016 and 2018 (Memoria de la Fiscalía General del Estado, 2019, pp. 891–892), as well as the lack of research that could point to possible solutions. This increase has not gone unnoticed by professionals and investigators.

Since the first explicit reference to APV was made in a scientific publication in 1957 (Sears et al., 1957), research has been directed primarily at establishing the prevalence of the phenomenon, developing measurement instruments, and analyzing the variables associated with this behavior (Simmons et al., 2018; Calvete and Pereira, 2019b). Studies related to interventions have also been published, although to a lesser extent (e.g., Ibabe et al., 2018; Curtis et al., 2019).

Reviews on the topic have attempted to structure the available evidence, using Bronfenbrenner's (1979) nested ecological model of development, in ontogenetic, microsystemic, exosystemic, and macrosystemic factors (Simmons et al., 2018; Calvete and Pereira, 2019a). Most research has focused on ontogenetic factors, understood as individual variables, and has analyzed the impact of gender, age, patterns of antisocial behavior, and psychological factors. Psychological factors have included the use of maladaptive schemas, impulsivity, anger traits, emotional regulation, coping skills, empathy, narcissism, self-esteem, mental health, and substance abuse. Research on the microsystem has focused on interpersonal relationships, primarily on family variables, including exposure to violence, parenting styles, interpersonal conflict, and parent characteristics, such as irritability and impulsivity (Calvete and Pereira, 2019b; Gallego et al., 2019; Hoyo-Bilbao et al., 2020).

Research on exosystemic variables addresses race, socio-economic status, family structure, and school attachment (Simmons et al., 2018; Hoyo-Bilbao et al., 2020). As for the macro system, although there is little research on this topic, APV is increasingly being conceptualized as a social problem (Holt, 2016) and the influence of the social and normative context on this behavior is being considered (Williams et al., 2016; Simmons et al., 2019a,b).

The results of the research conducted so far vary depending on the APV behaviors being measured, the methodology used and the sample with which the study has been conducted (clinical, judicial, community) (Hong et al., 2012; Simmons et al., 2018; Gallego et al., 2019). In some cases, it is not clear whether the characteristics associated with adolescents who assault their parents appear regardless of whether they are within or outside the juvenile justice system, and/or whether these characteristics are shared by other adolescents serving sentences for other crimes.

Studies With Judicial Samples

Most of the studies with judicial samples are based on an analysis of the files of youths in judicial measures, comparing those convicted of APV with those convicted of other crimes (Ibabe et al., 2009; Contreras and Cano, 2014a; Armstrong et al., 2018). From these comparisons, it has been concluded that the percentage of boys who are sentenced to prison for this offense is much higher than that of girls, and that they tend to enter the system at a later age than for other crimes. Other characteristics that are reflected in these files are drug use, mental health symptoms, behavioral problems at school, previous criminal behavior, and being part of single-parent families (Armstrong et al., 2018). However, there are studies in which youths convicted of APV are no different from those convicted of other drug offenses (Ibabe et al., 2009; Contreras and Cano, 2014a).

With regard to family structure, it should be noted that, although there are more single-parent families in the group of youths with judicial measures for APV offenses, the most frequent type of family in all cases is the traditional one, in which both parents are present (Ibabe et al., 2009; Contreras and Cano, 2014a). Single-parent families are often the result of divorce and the parent present is usually the mother (Ibabe et al., 2009; Contreras and Cano, 2014a). Contreras and Cano (2014a) warn, following Pagani et al. (2003), that the problem is not so much divorce or single parenting but the existence of a stressful family situation. This pattern is similar in the case of socioeconomic status because most families in both groups are middle or lower class, although the percentage of upper class families is higher among youths sentenced for APV than in the other group (Contreras and Cano, 2014a).

When compared with adolescents who are sentenced for other crimes, youths who have committed APV offenses are more likely to have conflictive family interactions in which violent episodes occur between parents, and between other siblings and parents (Contreras and Cano, 2014a). It has also been found that 80% of youths with judicial measures have been direct or indirect victims of domestic violence and show higher levels of aggression than those who have committed other offenses (Ibabe et al., 2009). Among adolescents incarcerated for APV offenses, there is also a higher level of physical and sexual victimization in girls than in boys, which has led to the suggestion that girls' violence against parents is more reactive than proactive (Armstrong et al., 2018). In addition to having experienced a history of previous domestic violence, adolescents convicted of APV are often firstborn and have permissive parents (Ibabe et al., 2009; Contreras and Cano, 2014a).

When the study includes, in addition to youths convicted only of APV or only of other offenses, a third group of youths who have committed APV and other offenses are the ones who are most different from the rest (Ibabe et al., 2009). These youths are more often the firstborn, come from traditional families, have had

more problems at school (adaptation, disruptive behaviors, and learning difficulties), have low self-esteem, and receive individual and family treatment. Those who have only committed APV offenses are older, come from single-parent families, have a higher social and economic status, have fewer APV offenses in their criminal record, and show less personal autonomy (Ibabe et al., 2009).

The results from the study of files described so far should be viewed with caution for several reasons. First, the information which the researcher uses has been collected for other purposes and is reflected in the files in qualitative terms or, at best, in a dichotomous manner (yes/no). Second, the professionals in charge of writing up each file may have different professional backgrounds (psychologists, educators, social workers), and the assessments they make are clinical judgments usually based on semi-structured interviews and not from assessment instruments based on evidence (e.g., self-esteem assessment). Third, at the time the assessment of the adolescent is made, the evaluators know the offense the adolescent is accused of so their expectations may have a significant effect on their assessment (Vilariño et al., 2013).

Some studies directly evaluate youths with judicial measures with questionnaires, comparing a group convicted of APV offenses with another group that has committed other offenses. In some cases, these two groups are compared with a third group of non-offenders (Contreras and Cano, 2014b, 2015, 2016a,b; Ibabe et al., 2014). In making such comparisons, it has been found that adolescents who have committed APV offenses have a higher level of school maladjustment (indiscipline, teacher rejection) and social maladjustment (aggression) than the other two groups (Ibabe et al., 2014). They share with the group of adolescents who have committed other offenses, drug use, hyperactivity, attention deficit, rule breaking, and social maladjustment. They differ, however, in that they have higher levels of personal maladjustment associated with depressive symptoms, such as affective depression, self-punishment, and low academic performance. No statistically significant differences were found in relation to self-esteem (Ibabe et al., 2014).

Youths who are prosecuted for APV also have a different family structure and dynamics than those who commit other offenses (Kennedy et al., 2010; Contreras and Cano, 2014b). They are more likely to belong to single-parent families and to have more negative parent–child relationships in which communication problems are common. They perceive their parents, especially mothers, as less loving, more critical, more rejecting, and more permissive-negligent (Contreras and Cano, 2014b).

Contreras and Cano (2015) found, as did Ibabe et al. (2014), that drug problems are common among adolescents with judicial measures, whether they have committed APV or other offenses, and that there are no statistically significant differences in self-esteem. These authors also reported similarities between both groups in impulsiveness, insensitivity to other people's needs and less ability to perceive and retain social information. The fundamental difference between adolescents with judicial measures for APV was that they perceived their parents as more hostile and less democratic at home, and that they were less able to anticipate the consequences of their behavior and to select appropriate means to achieve their social goals.

In a later study, Contreras and Cano (2016a) found that youths with judicial measures for APV offenses were more exposed to direct and indirect violence in their home than those who had committed other offenses, whereas the latter had experienced more violence in the street than the former. Both groups reported seeing or suffering more violence in general than non-offenders. It has also been shown that adolescents who have committed APV offenses have less prosocial and more antisocial attitudes, lower emotional intelligence, and higher levels of hedonism and power as a value (Contreras and Cano, 2016b).

The Present Study

The purpose of this study is to analyze the differences between a group of youths with judicial measures for APV offenses with a group of youths with judicial measures for other offenses, and with a third group of youths who have had no problems with the justice system, assessing directly the variables under study. In this way, the aim is to delimit which characteristics are exclusive to youths who have committed APV offenses and which are shared by youths who are serving sentences for other offenses. This general objective is specified by comparing the three groups in four sets of variables. First, they will be compared in relation to the APV behaviors they have carried out, as this type of violence is manifested through behaviors that differ in severity and frequency and which previous studies with judicial samples have not addressed. Second, the three groups will be compared in relation to drug use and academic performance, as there are discrepancies between the results of studies carried out with offenders' files and those using direct measures.

Third, they will be compared in relation to exposure to violence, both in general terms and specifically through the marital conflict solution tactics used by parents. Previous studies are consistent that youths convicted of APV have a higher probability of belonging to families characterized by conflictive relationships and violent episodes between parents, but no studies have delved into the tactics used by these parents to deal with such conflicts in the presence of their children. The study of marital conflict solution tactics is common in the area of intimate partner relationships (Loinaz et al., 2012) and has also been used as a way to measure abuse by parents on children (Straus et al., 1998) and from children to parents (Ibabe, 2015). However, so far there are no empirical studies that analyze whether these strategies are different from those used by the rest of the parents whose children do not assault them, despite the fact that they are frequently dealt with in family intervention with parents who are victims of APV (Pérez and Pereira, 2006; Pereira, 2019).

The fourth set of variables to compare participants relates to the concept that youths who assault their parents have of themselves, since previous studies with files state that they have low self-esteem while those studies carried out with direct measures find no differences. On this occasion, we have chosen to measure self-concept, rather than self-esteem, because this is a more stable construct over time and it manifests itself in different ways in the different domains of the adolescent's life: social, emotional, family, academic, and physical (García

and Musitu, 2014). In previous studies, self-concept has been positively related to psychological adjustment (Moreno et al., 2009), and negatively to depression and anxiety (Garaigordobil and Durá, 2006), aggressive behavior (Castro-Sánchez et al., 2019), victimization (Kowalski and Limber, 2013), motives for revenge (León, 2019), and cybervictimization (Romero et al., 2019).

In addition, the relative explanatory capacity of the variables studied are assessed, when they are analyzed simultaneously, to differentiate youths who are serving sentences for APV offenses from those who are serving sentences for other offenses, and from those who have had no problems with the justice system.

MATERIALS AND METHODS

Participants

One hundred and forty-eight young men between the ages of 14 and 21 years participated in this study (M = 17.21, SD = 1.24). There were 38 serving judicial measures for APV offenses (APV group), 52 for other offenses (Other offenses group), and the remaining 58 were students (Student group) in their first (67.2%) and second year of high school, who have not had any judicial measures against them.

In the Other offenses group, of the youths serving judicial measures, 41.2% (21) were doing so for robbery with violence and 27.5% (14) for robbery without violence. Offenses of assault and battery and forced entry were committed by three young people (5.9%); offenses of intimate-partner violence or against road safety by two young people (3.9%); and offenses of assault on authority, drug trafficking, against sexual freedom, and attempted murder by one person (2%). There was also one case (2%) that was serving the current judicial measure because of breaking a previous measure for robbery. There were 84.3% of the youths with judicial measures in the Other offenses group and 68.4% of youths in the APV group who had previous records, although the difference between the two groups was not statistically significant.

The judicial measure imposed for the majority of young people in the APV group was Living in an Educational Group (%, n) (60.5%, 23), followed by Open or Semi Open Imprisonment (21.1%, 8), Probation (13.2%, 5), and Weekend Imprisonment (2.6%, 1). In the case of youths in the Other offenses group, the measures were Probation (32.7%, 17), Living in an Educational Group (30.8%, 16), Open or Semi Open Imprisonment (28.8%, 15), and Attendance at a Day Center (1.9%, 1).

The number of young people diagnosed with mental illness in the sample was 6.2% (9), and the differences between the three groups in this aspect were not statistically significant. The percentage of youths who admitted to drug use was 83.8% (124) and, in this case, the differences between the groups were statistically significant [$\chi^2(2) = 23.46$, $p = 0.001$, Cramer's $V = 0.40$]. The percentage of adolescents in the Student group who admitted drug use was lower (65.5%) than that of youths with judicial measures in the group of APV (94.7%) and of Other Offenses (96.2%), which did not differ significantly from each other.

The difference between the groups in Frequency of drug use was statistically significant [$F(2, 78.79) = 58.32$, $p = 0.001$, $\eta^2 = 0.46$]. Students were those who recognized less frequent use (M = 2.34, DT = 2.28) vs. the APV group (M = 7.03, DT = 2.96) and the Other offenses group (M = 6.88, DT = 3.12), which had no statistically significant differences between them. Differences between the three groups in Academic performance were also statistically significant [$F(2, 72.95) = 22.04$, $p = 0.001$, $\eta^2 = 0.24$] and, as expected, students were perceived to have better performance (M = 6.93, DT = 1.28) vs. the APV (M = 4.76, DT = 2.67) and Other offenses group (M = 4.40, DT = 2.87). The latter two showed no statistically significant differences.

The traditional family is the most frequent in the Student group (84.5%) and in the Other offenses group (36%), while in the APV group, it is a family structure in which the mother is alone or with a new partner (56.8%). **Table 1** reflects the distribution of participants in relation to family structure.

Instruments

To collect information on the variables under study, a questionnaire was prepared that included the following scales and questions.

The nine self-reported APV behaviors were measured, according to Hernández (2016), by means of the following question: "During the time living with your parents or tutors, how often do you perform or have you performed some of the following behaviors?" The participants had to answer in relation to nine items, chosen from Cottrell's (2001) definition, which refer to behaviors aimed at controlling and/or causing physical, psychological, emotional, or economic harm to parents. These behaviors were as follows: Insulting; Running away from home; Spitting; making Obscene gestures; Stealing; Destroying their things; getting parents into Debt; Intimidating, blackmailing, or threatening them; Hitting, punching, throwing objects at them, and pushing them. Participants were asked to respond on an 11-point Likert-type scale, from 0 (Never) to 10 (Most often). Although this time the score of each item was used separately, Hernández (2016) has provided evidence of validity and reliability for the overall scale.

The Orue and Calvete Observed Violence Scale (2010) was used to measure previous violence exposure. It consists of 21

TABLE 1 | Participants' distribution according to their family structure.

	Family structure				
	Mother	**Father**	**Both**	**Others**	**Total**
Other offenses	13	6	18	13	50
	26.0%	12.0%	36.0%	26.0%	100.0%
APV	21	2	12	2	37
	56.8%	5.4%	32.4%	5.4%	100.0%
Students	6	2	49	1	58
	10.3%	3.4%	84.5%	1.7%	100.0%
Total	40	10	79	16	145
	27.6%	6.9%	54.5%	11.0%	100.0%

items, of which 9 relate to direct exposure as a victim and 12 to indirect exposure as a witness. In each case, the items refer to three types of violence (physical, verbal, and threats) in four contexts (school, street, home, and TV). Participants were asked to answer each item on an 11-point Likert scale from 0 (Never) to 10 (Every day). This response scale was preferred to the original one from 1 to 5 because it is more akin to the one commonly used in the Spanish educational system. Several investigations have provided evidence of validity and reliability for this scale (see Orue and Calvete, 2010). In this study, the internal consistency, measured with Cronbach's alpha, for the different subscales was Seeing violence in the classroom 0.79, Seeing violence in the street 0.85, Seeing violence at home 0.81, Seeing violence on TV, 0.79; Suffering violence in the classroom, 0.75; Suffering violence in the street, 0.82; and Suffering violence at home, 0.72.

The Autoconcepto Forma-5 [Self-concept Form-5] (AF5) scale by García and Musitu (2014) is composed of 30 items and was used to measure five dimensions of self-concept: Social self-concept, Emotional self-concept, Family self-concept, Academic self-concept, and Physical self-concept. Participants were asked to answer each item on an 11-point Likert-type scale from 0 (Total Disagreement) to 10 (Total Agreement). This response scale was preferred to the original one from 1 to 99 because it is more akin to the Spanish educational system. Several investigations have provided evidence of validity and reliability for this scale (see García and Musitu, 2014). In this study, the internal consistency, measured by Cronbach's alpha, was 0.89 for Academic self-concept, 0.70 for Social self-concept, 0.71 for Emotional self-concept, 0.81 for Family self-concept, and 0.79 for Physical self-concept, 0.73.

To measure the parents' marital conflict resolution strategies, Straus's (1979) Conflicts Tactics Scale, adapted to Spanish by Muñoz-Rivas et al. (2007), was used. Participants were asked the question: "When conflicts occur between your parents, how often do you witness the following reactions?" They were given 18 behaviors that they had to score in relation to their father and their mother, using an 11-point Likert scale from 0 (Never) to 10 (Always). These behaviors were the following: Talking quietly; Searching for information to support their point of view; Asking someone else for help; Insulting or cursing; Refusing to talk about a subject; Leaving the room upset; Crying; Saying something to annoy; Threatening to hit; Physically holding; Throwing an object; Hitting or hurting with an object; Pushing or grabbing; Slapping; Kicking, hitting, biting; Drowning; Thumping; and Threatening with a knife or other weapon.

To measure academic performance, participants were asked directly "Do you perform well academically?" providing them an 11-point Likert-type scale from 0 (Never) to 10 (Very often) to answer. In relation to drug use, participants were asked to three questions: "Do you use or have used drugs or alcohol?" "What substance?" "How often?" They were requested to answer the first question using a Yes/No scale, and the third by an 11-point Likert-type scale, from 0 (Never) to 10 (Very often). The second question was open to allow to report any possible substance.

The questionnaire also included queries about age, family structure, mental health diagnosis and, in the case of adolescents in the juvenile justice system, their legal situation, including the offense, the type of legal measures, and previous records. This information on the legal situation was checked with the persons in charge of supervising the implementation of the adolescents' legal measures.

Procedure

In the case of young offenders, after obtaining authorization from the government authority, the project was submitted to the heads of the entities responsible for implementing the legal measures. The technical staff of those entities were asked to obtain the informed consent of the young people and their legal guardians, and to ensure that the data collection interfered as little as possible with the functioning of the center and with the youths' daily activities.

In the interviews with participants, they were informed of the objectives of the project, and the anonymity and confidentiality of the information they provided was reiterated. Each participant answered the questionnaire individually or in small groups at the place where they were serving the judicial measure, or at the facility of the collaborating entity when they were on probation. In cases where reading comprehension was not good, the questionnaire was administered as a structured interview. Once the questionnaire was completed, it was checked and confirmed through the judicial authority whether the young people assigned to each group had or not had measures imposed for APV.

In the case of the students, after obtaining permission from the directors of the educational centers, it was explained to the participants that a study was being carried out from the university to find out "the habits and behaviors of adolescents today, both inside and outside the home." They were assured that their participation was anonymous and voluntary. All students agreed to participate and signed an informed consent form. Because they were all over 14 years old and outside the juvenile justice system, informed parental consent was not legally required. However, parental permission was obtained anyway in accordance with the World Medical Association's Declaration of Helsinki. The questionnaire was answered in the classroom, during regular class hours.

Design and Data Analysis

To carry out the research, a non-experimental design involving cross-sectional comparison between the independent groups on a series of variables was followed (Ato et al., 2013). Data analysis was conducted using the IBM SPSS 26.0 statistical package for Windows (IBM Corporation, 2019) and Real Statistics Resource Pack software 7.2 (2013-2020). First, for sample description purpose, tests of χ^2 were carried out to check the relationship between the group of participants and the categorical variables Drug use and Diagnosis of mental illness. We also analyzed whether there were statistically significant differences between the groups in Frequency of drug use and in Academic performance through ANOVA. Second, the internal consistency of the scales was calculated using Cronbach's alpha, the scale items were averaged to create the corresponding variables, and the descriptive analysis of all variables was performed. Cronbach's alphas were described in the instrument section and descriptive statistics in the subsequent analyses in the result section. Third, the groups under study were compared in relation to the

performance of APV behaviors by means of a MANOVA, with the Group variable as an independent variable and the nine APV behaviors as dependent variables. Fourth, four MANOVA were carried out to analyze in which variables of the four sets of exposure to violence, self-concept, and mother's and father's marital conflict resolution tactics the three groups of participants were significantly different, and what the effect size was in each case. For each of these MANOVA, it was previously verified that the correlations between the corresponding dependent variables were statistically significant and always between 0.2 and 0.8. Finally, a discriminant analysis was carried out to differentiate between the three groups of participants using the variables that had been statistically significant in the previous four MANOVA.

As statistical assumptions underlying the lineal model were not fully met, parameters were estimated using the resampling method bootstrapping simple and permutational under the simulation of 1,000 samples. Bootstrap bias-corrected accelerated method was used as a corrective method. The estimation of the MANOVA was carried out by means of the type III and type IV sum of squares, depending on the case, and with the estimation of Pillai's Trace.

For univariate inter-subject tests, robust tests of equality of means were calculated using Welch's F and for pair comparison Dunnett's C when variances were heterogeneous. The effect size was obtained by using Partial Eta Squared for multivariate analysis, Eta Squared for univariate analysis, and Cramer's V for χ^2 tests. Discriminant analyses had as starting point the group different sizes and validation classification with quadratic discriminant analysis.

RESULTS

As described in the section on data analysis, a MANOVA was carried out using the variable Group with three levels as an inter-subject factor: young people with judicial measures for APV, young people with judicial measures for Other offenses, and Students. The dependent variables were the APV behaviors: Insulting, Running away, Obscene gestures, Spitting, Stealing, Destroying things, getting parents into Debt, Intimidating, and Hitting. The results showed multivariate statistically significant differences in APV in function of the variable Group [*Pillai's Trace* = 0.83, $F(18, 248) = 9.88$; p exact < 0.001, $\eta_p^2 = 0.42$]. As reflected in **Table 2**, evidence of inter-subject effects indicated that statistically significant differences existed between the three groups in all APV behaviors.

The effect size was small for Spitting, intermediate for making Obscene gestures and Hitting, and large for all other behaviors. A posteriori comparison tests (Dunnett's C) established that there were statistically significant differences between the three groups in Insulting, Stealing, Destroying things, Intimidating, and Hitting. Student group reported Running away and getting parents into Debts less than the APV group and the Other offenses group, which did not differ from each other. Youths with APV measures reported more Spitting than the other two groups, which did not differ from each other. Last, Student group also reported less frequent Obscene gestures than APV; the difference between these two groups and the Other offenses group was not statistical significant. The averages of the three groups in the nine behaviors are shown in **Figure 1**.

TABLE 2 | Robust tests of equality of means (Welch) for the nine APV behaviors.

Variables	*F*	*df*	η^2
Insulting	28^{abc}	2, 66.93	0.29
Running away	44.74^{bc}	2, 53.23	0.38
Spitting	6.09^{ab}	2, 60.98	0.02
Obscene gestures	6.02^{b}	2, 55.27	0.06
Stealing	15.21^{abc}	2, 50.50	0.14
Destroying	21.29^{abc}	2, 52.75	0.14
Debts	18.05^{bc}	2, 49.66	0.20
Intimidating	18.79^{abc}	2, 50.15	0.17
Hitting	8.33^{abc}	2, 49	0.08

All F are statistically significant for $p < 0.001$. [a]Statistical significant difference ($p < 0.05$) between APV and Other offenses. [b]Statistical significant difference ($p < 0.05$) between APV and Students. [c]Statistical significant differences ($p < 0.05$) between Other offenses and Students.

Four MANOVA were then carried out to analyze which variables had statistically significant differences between the three groups of participants and to estimate the corresponding effect sizes. The dependent variables in each of them were, separately, the variables of exposure to violence, self-concept, and mother and father's marital conflict resolution tactics. Statistically significant multivariate effects in function of the variable Group were found for exposure to violence [*Pillai's Trace* = 0.6, $F(12, 278) = 9.85$; p exact < 0.001, $\eta_p^2 = 0.30$], self-concept [*Pillai's Trace* = 0.26, $F(10, 282) = 4.20$; p exact < 0.001, $\eta_p^2 = 0.13$], mother's marital conflict resolution tactics [*Pillai's Trace* = 0.50, $F(36, 210) = 1.95$; p exact < 0.001, $\eta_p^2 = 0.25$], and father's marital conflict resolution tactics [*Pillai's Trace* = 0.59, $F(36, 192) = 2.21$; p exact < 0.001, $\eta_p^2 = 0.29$]. The descriptive statistics of these variables for the three groups, as well as the univariate inter-subject effects, are presented in **Table 3**.

The variables that were statistically significant in these analyses, and have an effect size of $\eta^2 > 0.39$ (intermediate effect), were introduced into a further discriminant analysis in which the classifying variable was the Group to which the participants belonged and the discriminant variables: Seeing violence in the street, Seeing violence at home, Seeing violence in the classroom, Suffering violence in the street, Suffering violence at home, Suffering violence in the classroom, Family self-concept, mother's use of the tactics of Asking somebody else for Help and Crying, as well as father's use of the tactics Insulting/Cursing, Refusing to talk, Crying, Threatening to hit, Physically holding, Throwing an object, Hitting, Pushing or grabbing, and Slapping. The variables Frequency of drug use and Academic achievement were also included in the discriminant analysis because the differences between the groups were statistically significant, as described in the Participant section. A step-by-step method was used with Wilk criteria and group size was taken into account to carry out the analysis.

Two statistically significant discriminant functions were obtained, which allowed 79% of the cases to be correctly classified. The rotated structure matrix indicated that only 6 of the 20

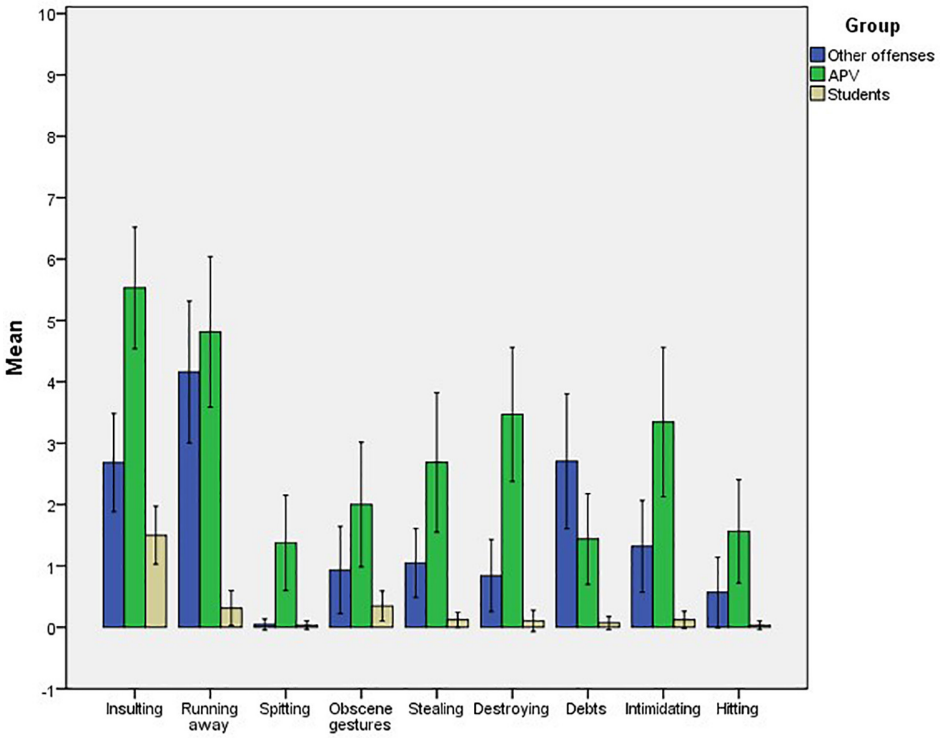

FIGURE 1 | Means and confidence intervals in the nine behaviors of APV for participants in the groups of APV, Other offenses, and Students.

variables included in the analysis were used in the solution. Consequently, a second discriminant analysis was carried out including only these five variables: Frequency of drug use, Academic achievement, Suffering violence in the street, Suffering violence at home, and mother's use of the tactics of Asking somebody else for Help. The percentage of cases correctly classified was the same, suggesting that this solution was more parsimonious. The cases correctly classified were validated with quadratic discriminant analysis. As reflected in **Table 4**, when the discriminant functions misclassify the cases in the APV group, they assign them to the Other offenses except for one participant. The misclassifications of the Other offenses cases are distributed equally in both groups of APV and Students. Finally, misclassifications of Students are mainly in favor of the Other offense group except for one participant.

Figure 2 shows that the first discriminant function [$\lambda = 0.27$, $\chi^2(12) = 153.15$; $p < 0.001$] places the centroids of the groups so that the Other offenses group is at one end (1.29), the Students group at the other (-1.24), and the APV group between the two (0.76), although closer to the other group of young people with judicial measures than to the Students group. The second function [$\lambda = 0.73$, $\chi^2(5) = 36.82$; $p < 0.001$] places the centroids of the groups so that the APV group is at one end (1.38), the Students group at the other end (-0.61), and the Other offenses group between the two (-0.18), closer to the Students than to the other group of young people with judicial measures.

The rotated structure matrix indicates that the first discriminant function is defined positively by the variables Suffering violence in the street (0.66) and Frequency of drug use (0.53), and negatively by Academic achievement (-0.39). The second function is defined positively by Suffering violence at home (0.62), mother's use of Asking for help a tactic to solve marital conflicts (0.43) and, negatively, by the Family self-concept (-0.48). In this way, young people with judicial measures, regardless of the offense committed, differ from the Student group in the frequency with which they are victims of violence in the street, with which they acknowledge using drugs and in having a lower academic achievement. Likewise, young people in the APV group differ from the other two groups in the frequency with which they suffer violence at home, in that their mothers use the tactic of asking somebody else for help as a way of resolving marital conflicts, and in having a more negative family self-concept.

DISCUSSION

The aim of this study was to compare a group of young people who were sentenced for APV with a group of young people who had committed other offenses, and with a third group who had not been in trouble with the justice system. A comparison was made in relation to the type of self-reported behavior, frequency of drug use, academic performance, exposure to violence, self-concept, and parents' marital conflict resolution tactics. The results obtained indicate, first of all, that, as expected, young people in the APV group are the ones who most often insult,

TABLE 3 | Descriptive statistics for the three groups in exposure to violence, self-concept, and mother's and father's marital conflict resolution tactics.

	APV		Other offenses		Students		Inter-subject tests			
Exposure to violence	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	***F***	***df***	***p***	η^2
Seeing violence in the classroom	5.98	2.61	5.08	2.90	3.99	1.79	9.18^{abc}	2, 78.88	0.000	0.10
Seeing violence in the street	7.24	2.64	7.12	2.23	5.16	2.34	12.49^{bc}	2, 85.36	0.000	0.15
Seeing violence at home	2.92	2.89	1.37	1.68	0.60	1.11	13.01^{abc}	2, 71.69	0.000	0.10
Seeing violence on TV	7.00	2.88	6.75	2.71	6.71	2.24	0.14	2, 83.07	0.869	0.001
Suffering violence in the classroom	2.44	2.26	2.64	2.68	1.62	1.63	3.70^{c}	2, 79.67	0.029	0.05
Suffering violence in the street	4.21	2.34	4.68	2.48	1.41	1.63	41.84^{bc}	2, 79.72	0.000	0.10
Suffering violence at home	2.61	2.64	1.15	1.75	0.65	1.09	9.69^{ab}	2, 71.70	0.000	0.06
Self-concept										
Academic self-concept	5.93	2.22	5.57	2.56	6.38	1.79	1.77	2, 81.32	0.177	0.00
Social self-concept	7.65	1.76	7.52	1.44	7.11	1.88	1.61	2, 87.42	0.205	0.00
Emotional self-concept	6.47	1.54	6.22	1.91	6.25	1.73	0.13	2, 88.96	0.88	0.00
Family self-concept	6.50	2.32	7.82	1.93	8.53	1.42	23.19^{abc}	2, 76.79	0.000	0.10
Physical self-concept	6.64	1.42	6.89	1.91	6.73	1.74	0.20	2, 91.50	0.82	0.00
Father's strategies										
Talking quietly	4.70	3.66	5.12	3.19	6.20	3.13	2.18	2, 59.79	0.122	0.02
Searching for information	4.00	3.37	3.85	3.70	4.61	3.44	0.56	2, 62.04	0.573	0.00
Asking for help	3.26	3.65	1.76	2.62	1.70	2.95	1.98	2, 59.72	0.147	0.01
Insulting/cursing	3.74	3.28	2.32	3.12	1.11	2.41	7.33^{b}	2, 55.75	0.001	0.09
Refusing to talk	3.74	3.63	3.68	3.59	2.07	2.83	3.63	2, 56.75	0.033	0.06
Leaving the room upset	3.19	3.56	4.47	3.66	3.13	3.38	1.61	2, 60.84	0.209	0.00
Crying	2.19	2.96	2.41	3.09	0.72	1.74	6.04^{c}	2, 50.43	0.004	0.10
Saying something to annoy	4.22	3.49	2.65	3.12	2.22	3.21	3.12^{c}	2, 61.07	0.051	0.00
Threatening to hit	2.11	3.30	1.29	2.39	0.33	1.48	5.05^{b}	2, 48.90	0.010	0.07
Physically holding	1.81	3.19	1.59	2.56	0.06	0.30	9.91^{bc}	2, 39.27	0.000	0.14
Throwing an object	1.48	3.09	0.71	2.29	0.09	0.45	3.77	2, 40.02	0.032	0.04
Hitting	1.81	3.40	1.44	3.00	0.37	1.15	3.95	2, 43.98	0.026	0.06
Pushing or grabbing	2.00	3.26	1.00	2.42	0.06	0.23	7.21^{b}	2, 39.08	0.002	0.09
Slapping	1.48	3.22	0.76	2.19	0.04	0.27	4.45	2, 39.26	0.018	0.06
Kicking	1.52	3.38	0.41	1.83	0.00	0.00	–	–	–	–
Drowning	0.74	2.18	0.29	1.71	0.00	0.00	–	–	–	–
Thumping	1.48	3.25	0.68	2.24	0.00	0.00	–	–	–	–
Threatening with a knife/weapon	1.30	2.83	0.26	1.54	0.02	0.14	3.13	2, 39	0.055	0.03
Mother's strategies										
Talking quietly	4.14	3.80	5.29	3.25	5.65	2.92	1.75	2, 63.18	0.183	0.01
Searching for information	4.79	3.58	4.39	3.87	4.95	3.36	0.26	2, 66.10	0.775	0.002
Asking for help	4.52	3.71	2.32	3.07	1.75	2.63	6.33^{ab}	2, 61.68	0.003	0.04
Insulting/cursing	3.83	3.58	1.87	2.44	1.46	2.71	4.91^{ab}	2, 64.15	0.010	0.03
Refusing to talk	3.48	3.39	3.63	3.04	2.53	3.16	1.69	2, 67.06	0.193	0.001
Leaving the room upset	4.00	3.59	3.08	2.97	3.65	3.51	0.71	2, 68.15	0.496	0.001
Crying	5.38	3.45	3.68	3.55	2.21	2.85	9.49^{ab}	2, 63.36	0.000	0.10
Saying something to annoy	4.03	3.20	2.79	2.92	2.54	3.11	2.19	2, 67.78	0.120	0.01
Threatening to hit	1.62	2.68	0.97	2.06	0.47	1.68	2.50	2, 59.68	0.091	0.03
Physically holding	1.59	2.60	0.92	1.92	0.35	1.48	3.37^{b}	2, 58.08	0.041	0.03
Throwing an object	1.83	3.17	0.92	2.12	0.46	1.65	2.63	2, 57.25	0.081	0.03
Hitting	1.24	2.13	0.61	1.33	0.51	1.53	1.36	2, 63.50	0.263	0.008
Pushing or grabbing	1.17	2.02	0.66	1.46	0.32	1.47	2.19	2, 63.11	0.121	0.02
Slapping	1.21	2.08	0.66	1.49	0.21	1.21	3.38^{b}	2, 58.72	0.041	0.03
Kicking	0.76	1.94	0.26	0.86	0.18	1.20	1.09	2, 62.05	0.343	0.00
Drowning	0.14	0.74	0.08	0.36	0.00	0.00	–	–	–	–
Thumping	0.14	0.74	0.16	0.59	0.14	1.06	0.01	2, 72.23	0.991	0.00
Threatening with a knife/weapon	0.48	1.27	0.05	0.16	0.04	0.26	1.83	2, 57.80	0.170	0.03

APV, adolescent-to-parent violence. [a]*Significant difference ($p < 0.05$) between APV and Other offenses.* [b]*Significant difference ($p < 0.05$) between APV and Students.* [c]*Significant differences ($p < 0.05$) between Other offenses and Students.*

TABLE 4 | Classification results for the participants in the groups of APV, Other offenses, and Students, using the two functions of the discriminant analysis.

			Predicted group membership			Total
			Other offenses	APV	Students	
Original group membership	*n*	Other offenses	24	7	6	37
		APV	8	21	1	30
		Students	3	1	53	57
	%	Other offenses	64.9	19.9	16.2	100
		APV	26.7	70	3.3	100
		Students	5.3	1.8	93	100

79% of original cases correctly classified.

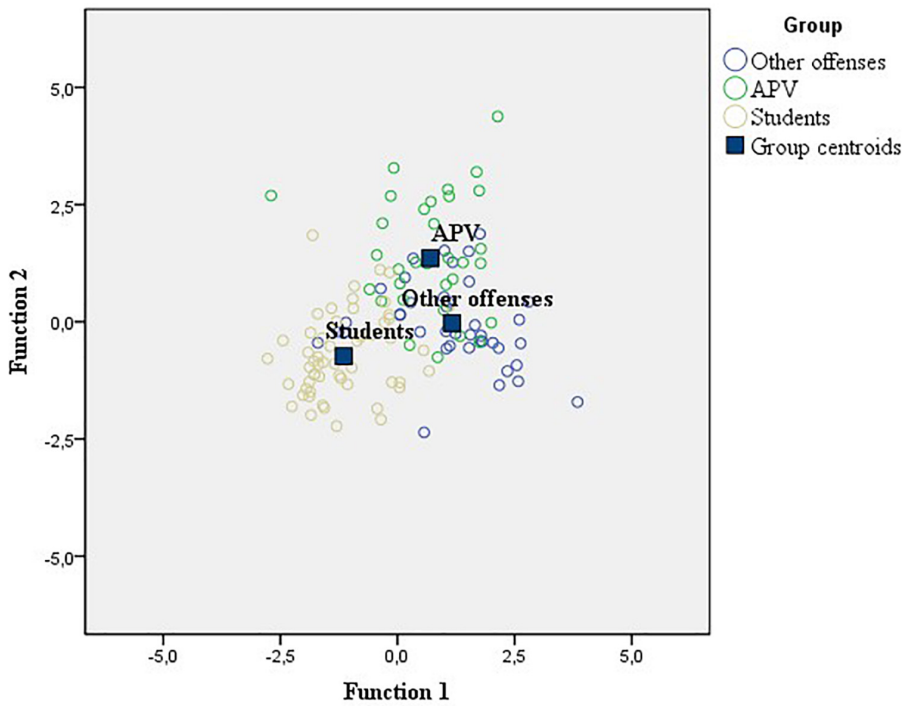

FIGURE 2 | Group centroids and distribution of the participants of the groups of APV, Other offenses, and Students, according to the two discriminant functions.

destroy things, steal from, intimidate, and hit parents, although young people who have committed other offenses also do so more often than students. The two groups with legal measures do not differ from each other in running away and in getting parents into debts, and do so more often than students.

The behaviors in which the young people in the APV group differ from the others are spitting, the least frequent even in the APV group. It is also worth noting the low frequency with which students perform all the behaviors, except the one of insulting. These differences highlight the importance of taking into account the behaviors through which APV is measured when comparing judicial, clinical, and community samples, or when the study focuses exclusively on the latter. If the frequency of behaviors that differ in severity is averaged, the final score may be misleading in some cases. The Cortina and Martin study (2020) shows that behaviors, such as spitting, intimidating, and hitting never occur alone in a community sample and that insulting, which does occur, is not a valid indicator of APV, as it is now relatively common for most teenagers to shout at and insult their parents at some point.

As with violence in intimate-partner relationships, APV follows an escalation of frequency and severity into abuse and the turning point comes when parents decide to seek clinical or legal help (Holt, 2016). One of the immediate consequences of not considering APV behaviors like insulting or shouting is that the prevalence of APV in the general population is reduced (Condry and Miles, 2014; Cortina and Martín, 2020). Recently, Simmons et al. (2019b) have developed an instrument for detecting parent–child abuse by considering when the severity or frequency of violent behavior exceeds what is socially considered "normal." The use of instruments, such as these in future research could help to clarify when a case of APV has happened, or simply when the behavior occurring is just a lack of respect, which is undesirable of course, but does not constitute abuse (Kennedy

et al., 2010; Hollenstein and Lougheed, 2013; Simmons et al., 2019b).

Second, the results of this study replicate those obtained by Contreras and Cano (2016a) regarding the differences between the three groups in terms of exposure to violence and drug use. Although these authors do not refer to academic performance, the results obtained with respect to this variable are along the same lines as those relating to drug use. As with APV behaviors, exposure to violence is not the same when it occurs at home, at school, on the street or on TV, nor is it the same to be a witness or a victim. Differences were found in all forms of exposure to violence, except watching violence on TV, as all three groups scored equally high in this regard.

However, what differentiates the APV group from the other two groups is seeing and suffering violence at home, as pointed out by the bi-directionality of violence hypothesis (Brezina, 1999; Gallego et al., 2019). Both variables are highly correlated, so when analyzed together, only suffering violence at home defines the discriminant function. Moreover, the single-parent family is the most frequent in the APV group, as opposed to the traditional one in the students and other offenses groups. However, as argued by Contreras and Cano (2014a), single-parent families are usually the result of divorce and the parent present is usually the mother, so the problem is not so much the absence of the father but the existence of a stressful family situation that may well precede or parallel the marital separation. It is worth noting at this point that in the majority of the most serious cases of intimate partner violence, the aggressor is the ex-partner of the victim (Fleury et al., 2000).

Going back to the types of exposure to violence, young people with judicial measures share, in contrast to students, seeing and suffering violence in the street. As in the case of exposure to violence at home, seeing and suffering violence in the street are highly correlated so that, when analyzed together, only one of the two variables defines the discriminating function. However, these data should be viewed with caution as they come from a cross-sectional, not a longitudinal, study and therefore no causality should be inferred from them. It is possible that exposure to violence in the street as well as increased frequency of drug use are consequences of serving judicial measures and not causes of them. Alternatively, they may simply be spurious relationships that respond to the impact of some other variable that has not yet been taken into account. This caution extends to the interpretation of the higher academic performance of the student group in relation to young people with judicial measures. It is important for future research to explore this point further, on the basis that they are characteristic not so much of young people who carried out APV, but rather of young people who are in the juvenile justice system.

Third, our results regarding self-concept show that it is a more appropriate construct to be studied in relation to APV than self-esteem, given its stability over time and the possibility to differentiate between several domains of an adolescent's life, along the lines of García and Musitu (2014). There are differences between the APV group and the other groups, but as might be expected, these differences focus only on the family facet of self-concept. It is interesting to note at this point that the facets of self-concept that were most related to cybervictimization (Romero et al., 2019) and revenge motivation (León, 2019) were family and academic. As in the case of exposure to violence in the street and frequency of drug use, the design of this study only allows us to know that there is a relationship between both variables, but not if low self-concept is a cause, as suggested by the studies focused on self-esteem, an effect, or simply a correlate of APV which underlies an adverse family context. In any case, these data should be taken into account when carrying out future research and setting the objectives of family interventions in cases of APV (Carrasco et al., 2018). It is logical to think that family self-concept is the dimension of self-concept most related to intra-family violence, not only because both refer to the same life domain but because family relationships have an important role in the origin, maintenance, and desistance of offending behavior (Martín et al., 2019).

The results also indicate that the mothers of young people in the APV group are the ones who ask somebody else for help the most, when compared with the other two groups; they are also the ones who shout and insult the most. It is reasonable to think that the strategy of asking somebody else for help is related to higher levels of intimate partner violence, with advanced stages of the violence escalation, as young people in the APV group are the ones who report being exposed to and suffering higher levels of domestic violence. Asking somebody else for help is generally considered an inadequate marital conflict resolution tactic (Straus, 1979), but may be the only way out when there has been an escalation of gender-related violence. Previous use of this strategy with a violent intimate partner may lead the mother to use it later with a son who abuses her, as a result of which he ends up in the juvenile justice system. It is likely that in community settings, mothers who are victims of APV will use other strategies, as the cases that reach the juvenile justice system are the most serious, and seeking outside help may be the result of previous failures using other strategies. This argument is supported by the fact that young people with APV offenses enter the juvenile justice system at an older age (Armstrong et al., 2018).

Although the strategy that allows discrimination between the three groups is that the mothers ask somebody else for help, it is also relevant for family interventions to analyze in more detail the type of marital conflict resolution strategies used by both parents. In this sense, the adolescents in the APV group differ from the student group, but not from the other offenses group, in that their mothers cry and slap more. In the case of parents, the differences are with students in insulting, threatening to hit, and pushing and with both groups in physically holding. Moreover, different from the students group are the young people in the other offenses group regarding saying something to annoy and crying. Curiously, it is parents of the other offenses group who seem to cry the most, above not only those in the student but in the APV group. It is interesting to note that there are no differences between the three groups in the positive strategies.

At this point, it should be noted that this work has several limitations that recommend caution in drawing conclusions. The most important is the small sample, which is due to the number of members of the APV group that was available in the territory at the time the study

was conducted. In addition, although women were initially included, their relatively smaller numbers and different distribution in each group made gender comparisons unfeasible, and girls were excluded from the analyses. Unlike community samples, judicial samples are small, and the percentage of girls does not exceed 8%. To increase the number of participants, if data collection is not to be extended over time, it is necessary to have access to other territorial jurisdictions which, as in the case of this study, may be on different islands or at a distance of more than 2,000 km. To solve this difficulty, future research should promote collaboration between researchers so that samples from different territories can be integrated. Lastly, measures of social desirability should also be included, given the social reproach to which APV is subjected (Calvete and Pereira, 2019a). Moreover, the forensic context of participants may influence them to hide the negative characteristics they possess and/or simulate positive characteristics that they lack (Arce et al., 2015; Fariña et al., 2017).

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants/participants' legal guardian/participants' next of kin.

AUTHOR CONTRIBUTIONS

All authors contributed in all the phases of the research and the elaboration of the article.

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Suicidal Ideation, Psychological Distress and Child-To-Parent Violence: A Gender Analysis

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Child-to-parent violence (CPV) is a growing public health problem with consequences for perpetrators and families. Most research has focused on individual and family risk factors. However, little is known about its links with individual outcomes. The aim of this study was to analyze the relationships between CPV and psychological distress, suicidal ideation, and self-concept in school-aged adolescents, taking into account the gender perspective. A study was conducted with a sample of 8,115 adolescents, aged between 11 and 16 years (M = 13.34; SD = 1.04) from the State of Nuevo León, Mexico. A MANOVA 3 × 2 was performed to analyze the data. The results revealed that adolescents involved in CPV showed higher levels of psychological distress and suicidal ideation and lower levels of family and social self-concept. It was also observed that girls with higher levels of CPV scored the lowest levels of psychological distress and suicidal ideation, as well as the lowest levels of family self-concept. The findings highlight that adolescents and especially girls involved in CPV also report internal maladjustment outcomes. Finally, the results and their implications for research and intervention with adolescents involved in CPV are discussed.

Keywords: child-to-parent violence, adolescence, suicidal ideation, psychological distress, self-concept

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INTRODUCTION

Child-to-parent violence (CPV) is defined as repeated behaviors of physical, psychological, or economic violence directed at parents (Pereira et al., 2017; Arias-Rivera and García, 2020). The increase in the prevalence of CPV in the last decade (Condry and Miles, 2014) has fueled great social concern (Holt, 2016). In studies conducted in different countries, the prevalence rates of CPV varied: in the US, rates ranged from 14 to 20% in physical CPV and from 34 to 64% in verbal and psychological CPV (Pagani et al., 2004, 2009; Lyons et al., 2015). In Spain, previous studies made with community samples have indicated different values: prevalence ranged from 4.6 to 21% in physical CPV (Calvete et al., 2011; Ibabe and Jaureguizar, 2011); and between 34 and 93% in psychological CPV (Pagani et al., 2004, 2009; Calvete et al., 2017). In a study carried out in Mexico by Calvete and Veytia (2018), a prevalence rate between 72 and 87.2% was obtained in psychological CPV and in the physical CPV dimension the rate was similar to that of Spain. In terms of the gender of the aggressors, it has been found that, on average, CPV is more common in boys than in girls (Aroca-Montolío et al., 2014; Martínez-Ferrer et al., 2018). Regarding the type of CPV (physical or psychological), in previous works different results have been observed, depending

on the sample used (Calvete and Veytia, 2018; Del Hoyo-Bilbao et al., 2020). Thus, some studies carried out with clinical or judicial samples have pointed out that boys use physical CPV more often than girls (Boxer et al., 2009; Routt and Anderson, 2011). However, other works made with community samples have observed that psychological CPV is more frequently used in girls (Ulman and Straus, 2003; Ibabe and Jaureguizar, 2011; Calvete et al., 2013; Calvete and Orue, 2016; Rosado et al., 2017). Nevertheless, in more recent studies, no gender differences were found in psychological CPV (Ibabe et al., 2013).

Involvement in CPV is the result of the complex interplay between individuals and their broader social environment. Based on the ecological model by Bronfenbrenner (1979), the Nested Ecological Model (Dutton, 1985; Cottrell and Monk, 2004) has been used to explain that CPV is the result of the interaction between the individual, family, school, peer group, community, and society contexts. In this regard, it has been found that risk factors at the micro-(e.g., parenting behavior), meso-(e.g., peer influence), exo-(e.g., media influence), macro-(e.g., gender role socialization), and chronosystem (change in family structure) level are likely to influence adolescents' violence toward their parents (Hong et al., 2012). In numerous studies ontogenetic variables associated with CPV have been analyzed, however, there are certain factors that have received less attention from researchers which we consider important, such as suicidal ideation, psychological distress, and self-concept. In relation to the differences between CPV toward the mother and father, previous studies have found that adolescents engage in greater verbal violence toward the mother, and greater physical violence toward the father (Lyons et al., 2015). In addition, other authors have pointed out that CPV toward the mother is linked with family variables such as physical punishment, while other factors such as impulsivity, substance abuse, or the impossibility of imposing discipline on the children are related to CPV regardless of the parent gender (Del Hoyo-Bilbao et al., 2020). The present study aimed to analyze the relationships between the variables at the individual level and CPV, taking into account the gender of the perpetrator.

According to the General Strain Theory (Agnew, 2006), CPV could represent a maladaptive response to stress or dysfunctional resources to face stress in adolescents (Brezina, 1999). Psychological distress is defined as a state of emotional suffering characterized by symptoms of depression, anxiety, and somatic symptoms as a consequence of stressors and demands that are difficult to cope with in daily life (Mirowsky and Ross, 2002; Drapeau et al., 2012). Adolescents with high levels of psychological distress are likely to be involved in CPV (Kennedy et al., 2010; Gámez-Guadix and Calvete, 2012). Therefore, CPV could be a strategy that may buffer the detrimental effects of high psychological distress (Beckmann, 2019). Defiance of rules and authority and aggression may be a self-protective strategy to face stress and adversity (Ford et al., 2006) and a negative way to try to emotionally overcome negative situations (Siegel, 2013).

Certain protector factors are related to lower involvement in CPV, despite psychological distress. Previous studies have highlighted that adolescents who reported lower levels of CPV have high levels of emotional regulation (Martínez-Ferrer et al., 2018) and empathy (Cottrell and Monk, 2004). In this sense, self-concept is an important resource that is associated with lower levels of psychological distress (Khalaila, 2015; Grubbs and Exline, 2016; Turner et al., 2017) and with low involvement in CPV (Calvete et al., 2011). However, other authors observed no significant differences in self-esteem between CPV offenders and CPV non-offenders (Ibabe et al., 2014; Contreras and Cano, 2015; Loinaz and Sousa, 2020). Nevertheless, these studies provided a general measure of self-esteem or self-concept. Prior studies have reported that self-concept, evaluated from a multi-dimensional perspective, is related to different forms of violence such as peer aggression and intimate partner violence (García et al., 2006; Fuentes et al., 2011). In particular, previous studies concluded that family self-concept protects adolescents from getting involved in peer aggression and bullying (Romero-Abrio et al., 2019), whereas social self-concept is positively related to adolescent involvement in peer and school aggression as perpetrators (Usán and Salavera, 2017; Chacón-Cuberos et al., 2020). However, no study to date has focused on these particular dimensions of self-concept.

Both psychological distress and self-concept are related to suicidal ideation among adolescents (Espinoza-Gómez et al., 2010; Maraš et al., 2011; Ramírez and Oduber, 2015). Furthermore, it has been pointed out that suicidal ideation is linked to adolescent involvement in peer aggression, bullying, cyberbullying, victimization, and intimate peer violence (Garaigordobil, 2011; Buttar et al., 2013; Kowalski et al., 2014; Romero-Abrio et al., 2018; Iranzo et al., 2019). Despite the scarcity of research focusing on suicidal ideation and CPV, prior studies have concluded that CPV is associated with greater suicidal ideation (Clarke et al., 2017). Moreover, a recent study showed that girls involved in CPV were more likely to report psychological distress and suicidal ideation than boys (Armstrong et al., 2018).

The Present Study

Prior research has analyzed CPV taking into account socio-ecological theoretical frameworks. The present study also takes into account the General Strain Theory (Agnew, 2006) and examines the relationships between CPV and psychological distress, suicidal ideation, and family and social self-concept. Adolescents with high levels of involvement in CPV were expected to report the lowest level of psychological adjustment—high levels of psychological distress, suicidal ideation, and social self-concept, and low levels of family self-concept. It has been consistently reported that CPV is more frequent among boys (Arias-Rivera and García, 2020; Del Hoyo-Bilbao et al., 2020). However, girls tend to show higher levels of psychological distress (Hamilton et al., 2016; Hébert et al., 2016), suicidal ideation (Hinduja and Patchin, 2010; Nock et al., 2013), and family self-esteem (Birndorf et al., 2005; Fuentes et al., 2011; Romero-Abrio et al., 2019) than boys. Therefore, gender was considered in the present study.

Based on the foregoing research, the following hypotheses were proposed:

H1: Adolescents reporting higher levels of CPV were expected to show higher levels of psychological distress and suicidal ideation.

H2: Adolescents with low levels of involvement in CPV were expected to show higher levels of family and social self-concept.

H3: Girls were expected to report higher levels of psychological distress, suicidal ideation, and family self-concept, and lower levels of social self-concept than boys.

H4: Girls highly involved in CPV were expected to report the most adverse maladjustment outcomes, characterized by the highest levels of psychological distress and suicidal ideation and the lowest level of family and social self-concept.

MATERIALS AND METHODS

Participants

Proportional stratified sampling was carried out according to urban and rural educational centers (a total of 984 centers) in the State of Nuevo León (Mexico) (confidence level 90%, alpha 0.05). A total of 8,115 adolescents participated (51.5% boys and 48.5% girls) from 118 centers (62 urban and 56 rural), of which 62.1% studied in urban schools and 37.9% studied in rural schools. The ages ranged from 12–13 years (53.7%) to 14–16 years (46.3%). Data lost by scale or sub-scale, provided they did not exceed 15%, were processed using the multiple linear regression imputation model (Allison, 2000; Fernández-Alonso et al., 2012). Univariate atypical data were detected by exploration of standardized scores (Hair et al., 1999).

Measures

Conflict Tactics Scales, CTS2, children to parents version (Straus and Douglas, 2004) adapted by Gámez-Guadix et al. (2010). This two-factor scale is composed of 6 Likert-type items with four response options (1 = never, 4 = more than 20 times) that assesses violence toward the mother and the father, separately (e.g., "I threaten or have threatened to beat up my parents, but I haven't"). The scale allows for two factors to be scored (physical violence and verbal violence); and an overall rating of CPV. Cronbach's alpha in this study were 0.70 for the subscale of violence toward the mother (0.71 and 0.75 for physical and verbal violence, respectively), 0.75 for the subscale of violence toward the father (0.85 and 0.70 for physical and verbal violence, respectively), and 0.71 for the full scale. The CFA using the Maximum Likelihood model presented an acceptable fit to the data [$SB\chi^2$ = 52.8465, gl = 20, $p < 0.001$, CFI = 0.975, RMSEA = 0.014 (0.010, 0.019)] for the subscale of violence toward the mother; and [$SB\chi^2$ = 82.0587, df = 22, $p < 0.001$, CFI = 0.963, RMSEA = 0.018 (0.014, 0.023)] for the subscale of violence toward the father.

Psychological Distress Scale (K10) (Kessler and Mroczek, 1994). It consists of 10 Likert-type items with five response options (1 = never, 5 = always) that assesses depressive and anxiety symptoms (e.g., "How often did you feel so sad that nothing could cheer you up?"). Cronbach's alpha was 0.90. The CFA showed a good fit to the data [$SB\chi^2$ = 512.36, df = 29, $p < 0.001$, CFI = 0.981, RMSEA = 0.045 (0.042, 0.049)].

Suicidal Ideation Scale (Roberts, 1980), adapted by Mariño et al. (1993). It consists of 4 Likert-type items with four response options (1 = 0 days, 4 = 5–7 days) that rates the frequency of suicidal thoughts during the previous week (e.g., "I felt that my family would be better if I were dead"). Cronbach's alpha was 0.84. The CFA presented a good fit to the data [$SB\chi^2$ = 1.643, df = 1, p = 0.199, CFI = 0.991, RMSEA = 0.009 (0.000, 0.032)].

Form-5 Scale—AF-5—(García and Musitu, 1999). For the purposes of the present study the social and family self-concept subscales were selected. The family self-concept subscale is composed of 6 items that assesses adolescent self-perception in the family context (e.g., "At home they criticize me a lot" reverse item). The social self-concept subscale consists of 6 items that assesses adolescent self-perception in a social context (e.g., "I make friends easily"). Both subscale responses ranged from 1 = completely disagree to 99 = completely agree. Cronbach's alpha in this study was 0.77 for the family self-concept and 0.88 for social self-concept. The CFA using the Maximum Likelihood model presented an acceptable fit to the data [$SB\chi^2$ = 6,892.5998, df = 337, $p < 0.001$, CFI = 0.958, RMSEA = 0.050 (0.049, 0.051)].

Procedure

Researchers from the Autonomous University of Nuevo León (Mexico) in collaboration with the Pablo de Olavide University (Spain) carried out the planning and the research. First, an informative seminar was held with the students to explain the objectives, the scope of the study, and the procedure to be followed. Then, the necessary authorizations were obtained from school administrators and participating families were requested to give active parental consent for their child to participate in the

TABLE 1 | Sociodemographic variables.

		CPV			Total
		Low	Moderate	High	
Gender					
Boys	*N*	3,381	680	116	4,177
	%	80.9	16.3	2.8	100
Girls	*N*	2,797	924	217	3,938
	%	71.0	23.5	5.5	100
Total	*N*	6,178	1,604	333	8,115
	%	76.1	19.8	4.1	100

TABLE 2 | MANOVA of suicidal ideation, psychological distress, family self-concept, and social self-concept.

Variables						
	Λ	*F*	gl_{entre}	gl_{error}	*p*	η^2
(A) CPV[a]	0.859	159.598	8	16,210	< 0.001***	0.073
(B) Gender[b]	0.977	48.030	4	8,105	< 0.001***	0.023
A × B	0.992	7.735	8	16,210	< 0.001***	0.004

[a] a_1, *low CPV,* a_2, *moderate CPV,* a_3, *high CPV.*
[b] b_1, *boys,* b_2, *girls.*
***$p < 0.001$.

TABLE 3 | Means, standard deviation (SD), and ANOVA results of CPV and suicidal ideation, psychological distress, family self-concept, and social self-concept.

	CPV			*F*	η^2
	Low	**Moderate**	**High**	***F*(2, 8,112)**	
SI	1.378 (0.586)^c	1.775 (0.818)^b	2.130 (0.893)^a	318.600***	0.073††
PD	1.893 (0.765)^b	2.622 (0.930)^a	2.752 (1.004)^a	545.973***	0.119††
FSC	82.079 (18.198)^a	71.967 (22.728)^b	60.526 (22.010)^c	251.839***	0.058†
SSC	76.349 (18.012)^a	76.410 (18.322)^a	65.208 (22.040)^b	32.288***	0.008

SI, suicidal ideation; PD, psychological distress; FSC, family self-concept; SSC, social self-concept.
*Bonferroni test α = 0.05, a > b > c; ***p < 0.001; η^2 = 0.01-0.06 (small effect †), > 0.06-0.14 (moderate effect ††).*

study. The battery of instruments was administered voluntarily, anonymously, and supervised in two different sessions of approximately 25 min during school hours with a 15 min rest period between sessions. The questionnaires were answered individually on paper, administered in groups, and supervised by a group of previously trained researchers. Participation was voluntary and anonymous, with a rejection rate of 0.21%. It is important to underline that the study fulfilled the ethical values required in research with human beings, respecting the fundamental principles included in the Helsinki Declaration (World Medical Association, 2013): informed consent and the right to information, protection of personal data and guarantees of confidentiality, non-discrimination, gratuity, and the possibility of withdrawing from the study at any stage.

Ethics

The studies involving human participants were reviewed and approved by Institutional Review Board of the Faculty of Psychology of Autonomous University of Nuevo Leon.

Data Analysis

First, in order to obtain an optimal number of clusters, a two-stage cluster analysis was performed using the two dimensions of CPV (physical violence and verbal violence) toward the mother and the father. Three clusters were obtained with a good fit: low, moderate, and high CPV. Next, the k-means cluster analysis was performed. Finally, a multivariate factorial design was carried out (MANOVA 3 × 2) with CPV (high, moderate, and low) and gender (boy and girl) as fixed factors, and as dependent variables, psychological distress, suicidal ideation, and self-concept (family self-concept and social self-concept), in order to analyze possible interaction effects. SPSS software (version 25) was used.

RESULTS

Descriptive Analysis

Table 1 shows the distribution of adolescents according to CPV and gender, psychological distress, suicidal ideation, and self-concept. The percentage of boys and girls was similar in all the variables.

Multivariate Analysis

A MANOVA was carried out and significant differences were obtained in the main effects of CPV [Λ = 0.895, F(8, 16,210) = 159.598, $p < 0.001$, η^2 = 0.073], and gender [Λ = 0.977, F(4, 8,105) = 48.030, $p < 0.001$, η^2 = 0.023] (see **Table 2**). The effect size of η^2 is between moderate and low. Moreover, a statistically significant interaction for CPV and gender [Λ = 0.992, F(8, 16,210) = 7.735, $p < 0.001$, η^2 = 0.004] was obtained.

Regarding CPV, the ANOVA results found significant differences in psychological distress [F(2, 8,112) = 545.973, $p < 0.001$, η^2 = 0.119], suicidal ideation [F(2, 8,112) = 318.600, $p < 0.001$, η^2 = 0.073], family self-concept [F(2, 8,112) = 251.839, $p < 0.001$, η^2 = 0.058], and social self-concept [F(2, 8,111) = 32.288, $p < 0.001$, η^2 = 0.008] (see **Table 3**). The results obtained in the Bonferroni test (α = 0.05) showed that adolescents with high CPV obtained the highest scores in psychological distress, and suicidal ideation, whereas those with low CPV obtained the highest scores in family self-concept and social self-concept. The effect size of η^2p is low and moderate (between 0.008 and 0.119).

Regarding gender, the ANOVA results showed significant differences in psychological distress [F(1, 8,113) = 572.304, $p < 0.001$, η^2 = 0.066], suicidal ideation [F(1, 8,113) = 197.974, $p < 0.001$, η^2 = 0.024], and family self-concept [F(1, 8,113) = 18.774, $p < 0.001$, η^2 = 0.002]. As shown in **Table 4**, girls scored higher than boys in psychological distress and suicidal ideation, while boys scored higher in family self-concept.

Univariate Analyses of Interaction Effects

A statistically significant interaction effect was obtained between CPV, gender, and psychological distress [F(2, 8,108) = 17.049,

TABLE 4 | Means, standard deviation (SD), and ANOVA results of gender, suicidal ideation, psychological distress, family self-concept, and social self-concept.

	Gender		*F*	η^2
	Boys	**Girls**	***F*(1, 8,113)**	
SI	1.363 (0.564)	1.568 (0.743)	197.974***	0.024†
PD	1.824 (0.738)	2.263 (0.909)	572.304***	0.066††
FSC	80.797 (18.334)	78.901 (21.052)	18.774***	0.002
SSC	75.915 (17.827)	76.335 (18.650)	1.075	0.000

SI, suicidal ideation; PD, psychological distress; FSC, family self-concept; SSC, social self-concept.
****p < 0.001.*

TABLE 5 | Means, standard deviation (SD) between CPV and gender and suicidal ideation, psychological distress, and family self-concept.

	CPV and gender						*F*	η^2
	Low CPV		Moderate CPV		High CPV			
	Boys	Girls	Boys	Girls	Boys	Girls	*F*(2, 8,108)	
SI	1.31^{f} (0.514)	1.43^{e} (0.636)	1.53^{d} (0.641)	1.82^{c} (0.836)	1.98^{b} (0.849)	2.21^{a} (0.944)	14.311***	0.004
PD	1.72^{e} (0.671)	2.04^{d} (0.804)	2.21^{c} (0.799)	2.74^{b} (0.895)	2.67^{b} (0.933)	3.16^{a} (0.916)	17.049***	0.004
FSC	82.46^{a} (17.445)	82.52^{a} (18.441)	75.55^{b} (19.534)	71.95^{c} (23.430)	62.99^{d} (21.097)	61.81^{e} (25.703)	9.396***	0.002

SI, suicidal ideation; PD, psychological distress; FSC, family self-concept.
****p < 0.001.*
a > b > c > d > e > f.

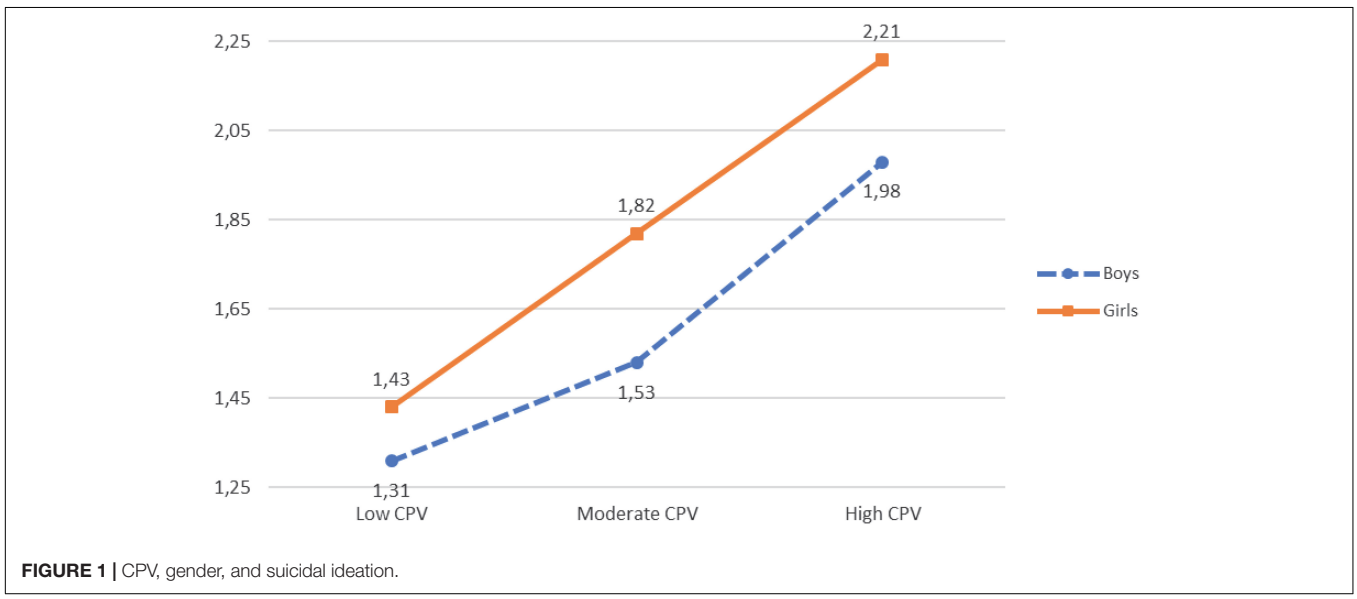

FIGURE 1 | CPV, gender, and suicidal ideation.

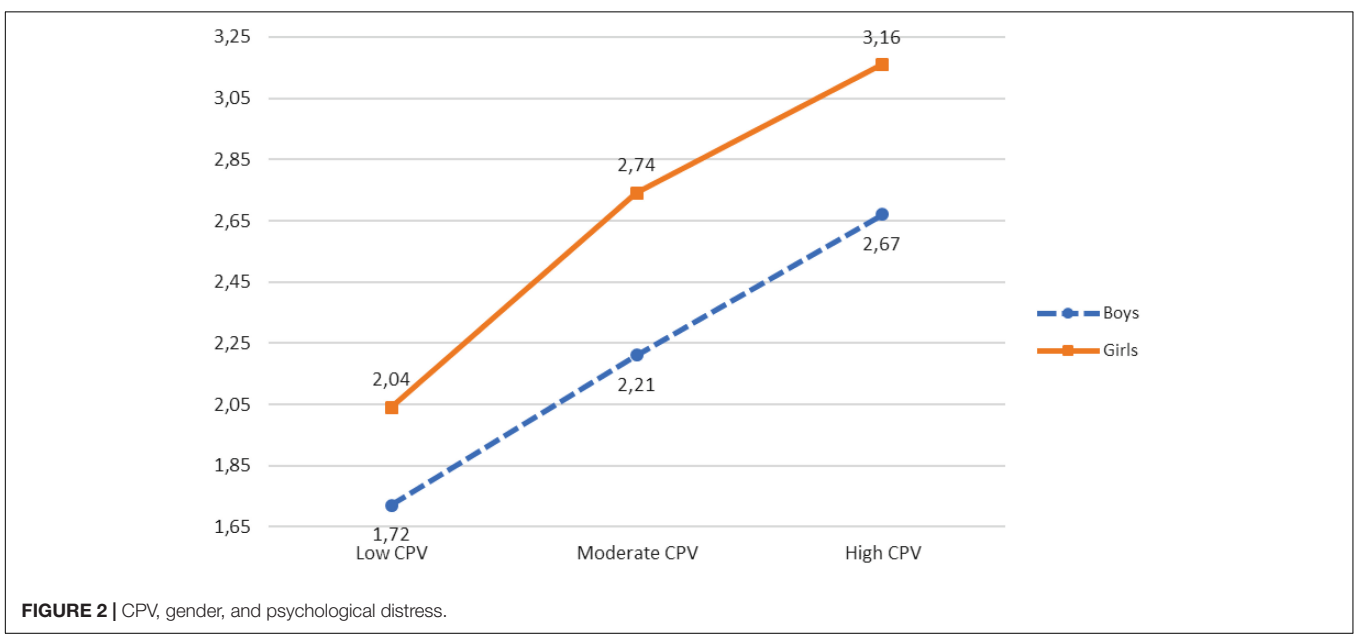

FIGURE 2 | CPV, gender, and psychological distress.

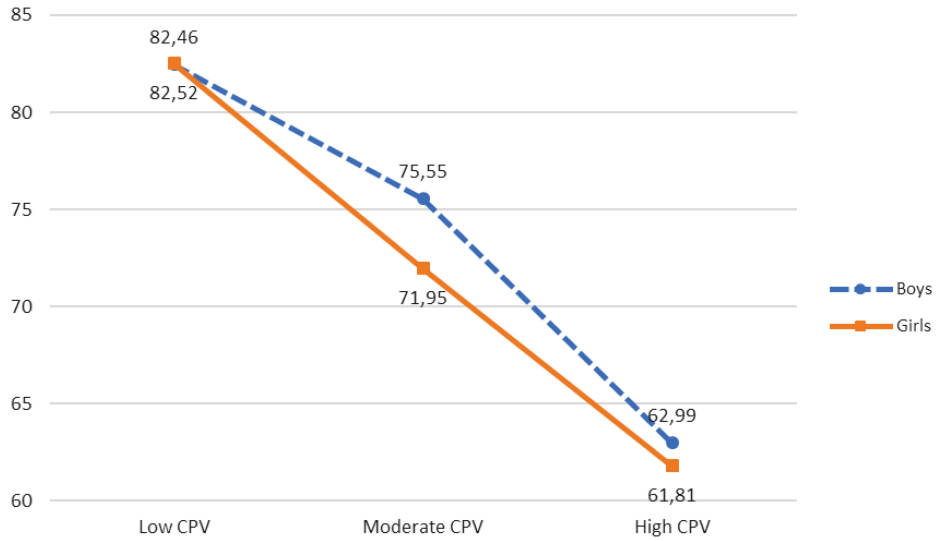

FIGURE 3 | CPV, gender, and family self-concept.

$p < 0.001$, $\eta^2 = 0.004$]. The results of the *post hoc* contrasts performed with the Bonferroni test ($\alpha = 0.05$) (see **Table 5** and **Figure 1**) indicated that when CPV was low, moderate, or high, girls reported higher scores in psychological distress than boys. However, when CPV was high, girls were the ones with the highest psychological distress.

Thus, a statistically significant interaction effect was observed between CPV, gender, and suicidal ideation [$F(2, 8{,}108) = 14.311$, $p < 0.001$, $\eta^2 = 0.004$]. The results of the *post hoc* contrasts performed with the Bonferroni test ($\alpha = 0.05$) (see **Table 5** and **Figure 2**) revealed that when CPV was low, moderate, or high, boys obtained lower scores in suicidal ideation than girls. In addition, when CPV was high, girls scored higher than boys in suicidal ideation.

Further, a statistically significant interaction effect between CPV, gender, and family self-concept [$F(2, 8{,}108) = 9.396$, $p < 0.001$, $\eta^2 = 0.002$] was also obtained. As illustrated in **Table 5** and **Figure 3**, when CPV was low or high, no statistically significant differences were found between girls and boys, However, in moderate CPV, boys showed higher scores in family self-concept than girls.

DISCUSSION

This study aimed to broaden knowledge of CPV and its association with various maladjustment outcomes. Based on the General Strain Theory, this research examined the relationships between CPV, psychological distress, suicidal ideation, and family and social self-concept, according to the gender of adolescents. Firstly, results indicated that CPV levels increased as psychological distress increased, confirming our hypothesis. These findings are consistent with those found in previous studies highlighting the direct association between adolescent aggression toward parents and outcomes of psychological distress such as depressive symptoms and anxiety (Kennedy et al., 2010; Gámez-Guadix et al., 2012; Sanchez-Meca et al., 2016). Our results add to a body of research showing that adolescents engaged in CPV are likely to suffer from stress, and suggests that CPV is also associated with higher levels of psychological distress, thus supporting the General Strain Theory (Brezina, 1999; Agnew, 2006). This theory posits that CPV could be a strategy to respond to previous aversive family interactions and reduce stress (Ibabe, 2019).

Secondly, regarding suicidal ideation, the findings are very similar to the ones above. As expected, our findings showed that greater involvement in CPV resulted in higher levels of suicidal ideation. Previous studies have reported the relationship between suicidal ideation and other forms of violence, such as bullying and cyberbullying (Hinduja and Patchin, 2010; Litwiller and Brausch, 2013; Barzilay et al., 2017); however, few studies have analyzed its link with CPV. Our results suggests that CPV could be the expression of core maladjustment outcomes in adolescents such as suicidal ideation, which is in turn associated with psychological distress. Moreover, psychological distress, depression, anxiety, and suicidal ideation are likely to co-occur in adolescence (Juon et al., 1994; O'Leary et al., 2006; Sampasa-Kanyinga and Hamilton, 2016; Iranzo et al., 2019) indicating that these adolescents cope with a set of adverse experiences in a negative way. Previous research has highlighted that negative family relationships and exposure to family violence, and hazardous and negative parent–child relationships increase adolescent psychological distress, which is in turn related to CPV (Beckmann, 2019; Calvete et al., 2020). Similarly, Contreras et al. (2016) found that adolescents who abused their parents reported higher levels of exposure to violence not only at home but also in the school and community. Future research should further explore the links between negative family relationships, psychological distress, and suicidal ideation on the one hand, and CPV on the other.

Thirdly, with regard to the second hypothesis, the results showed that CPV levels increased as family and social self-concept decreased. These results are consistent with those reported in previous studies for other forms of violence, and also they add scientific evidence to support the fact that adolescents who engage in CPV have psychological adjustment problems (Forrester et al., 2008; Calvete et al., 2014; Ibabe and Bentler, 2016; Sanchez-Meca et al., 2016). More specifically, teens with CPV problems have few resources to face stressful and adverse experiences, such as self-concept (Calvete et al., 2011), in cases of CPV. It is important to underline that most studies have used unidimensional and general measures of self-concept or self-esteem. This result provides interesting new data on CPV in adolescents by examining two specific dimensions of self-concept. Interestingly, our study showed that both family and social self-concept are important resources associated with lower levels of CPV. This result diverges from the findings reported in previous studies examining other forms of violence such as bullying, which found that perpetrators reported higher levels of social self-esteem and self-concept (Estévez et al., 2006; Fuentes et al., 2011). Our findings suggest that CPV is particularly rooted in adverse family dynamics. This result can be considered highly significant and these relationships should be analyzed in greater depth in future research.

Finally, in terms of gender differences, the results showed that girls reported higher levels of psychological distress and suicide ideation and lower levels of family self-concept than boys. However, outcomes for the interaction between CPV and gender revealed the need for more in-depth analysis of these relationships. Findings obtained indicated that girls scored higher on psychological distress than boys and as their involvement in CPV was more frequent, the differences between boys and girls were greater. This trend was observed for suicidal ideation too. Girls showed more suicidal ideation than boys, especially those with high CPV. These results are in line with prior studies (Hinduja and Patchin, 2010; Nock et al., 2013) and with those that have analyzed gender differences in other forms of violence (Romero-Abrio et al., 2018). Specific studies on CPV have also found that girls with psychopathological problems (anxiety, depression, and paranoid ideation, among others) exhibit greater CPV than boys (Rosado et al., 2017). However, our results differ from those reported in other studies in which no differences were found between boys and girls (Williams et al., 2017). This result can be attributed to the fact that, on the one hand, girls tend to report higher levels of depression, anxiety, and stress than boys (Hamilton et al., 2016; Hébert et al., 2016) and, on the other, girls are more sensitive to problems in the family, an aspect that is closely related to CPV. In this sense, in this study girls with high CPV reported the lowest scores in family self-concept; hence, these adolescents feel less valued and less accepted by their parents. These findings highlight the role of family relationships in CPV and psychological distress. However, more research is needed to explore the effect of family self-concept on the relationship between CPV and psychological distress taking into account gender differences.

LIMITATIONS

First, variables did not exhibit causal relationships because a cross-sectional design was applied. Longitudinal studies should therefore be carried out in the future. Second, these findings were obtained from a Mexican sample and could influence the generalization of the study results. Further research in other countries is needed to address these findings in other cultural contexts. In addition, this research was conducted with a school sample, thus, in future studies it would be interesting to expand the sample in other areas of study, such as in clinical and judicial samples. Moreover, it is important to highlight that this study was carried out with self-report measures, therefore, obtaining information from fathers, mothers, and teachers is necessary in order to better understand the relationships between the variables analyzed. Likewise, these results should be interpreted with caution because the Conflict Tactics Scale (CTS2) does not have a time parameter and could lead to recall bias due to the difficulty in accurately and completely remembering previous memories. Future research that includes the temporal dimension would allow us to further develop the findings obtained. Finally, we mentioned the differences found between CPV toward mothers and CPV toward fathers in previous research at the introduction of this work. However, these differences have not been analyzed in our study, and we consider it worthwhile to separately examine these dimensions of CPV, in order to advance the understanding of this kind of violence.

CONCLUSION

The findings obtained in this study provide, in our opinion, relevant information in the field of psychology and education regarding the relationships between CPV and psychological distress, suicidal ideation, and self-concept in school-aged adolescents. It has been demonstrated that these three variables are significantly related, requiring an expansion of knowledge in the field of psychology and education. Thus far, these variables as a whole have been little explored. Findings reveal that CPV perpetrators, especially girls, also show maladjustment problems such as psychological distress, suicidal ideation, and poor family self-concept. Although boys are more frequently involved in CPV, girls show greater maladjustment problems. Our results also suggest the importance of examining self-concept from a multidimensional perspective. These findings underline that different self-concept domains are more related to different forms of violence. While social self-concept is important when examining peer aggression, family self-concept has been found to be especially relevant for understanding CPV. Finally, based on these findings, intervention programs should take into account that girls engaging in CPV also have more maladjustment outcomes. For example, actions should be implemented to foster family self-concept and to help adolescents involved in CPV (especially girls) and their families cope with stressful situations in the family. In addition, some relevant implications for prevention and intervention programs in CPV were identified. On the one hand, the appropriateness of continuing to develop

educational and treatment programs that promote networking and jointly consider different areas of intervention: school, family, and individual, should be considered; on the other hand, the need to consider psychological distress, suicidal ideation, and self-concept in the design of CPV prevention and intervention programs is highlighted.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation, to any qualified researcher.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Institutional Review Board of the Faculty of Psychology of Autonomous University of Nuevo Leon. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

All authors of the manuscript contributed equally to the research and writing of the present study.

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Child-to-Parent Violence and Dating Violence Through the Moral Foundations Theory: Same or Different Moral Roots?

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The objective of this study is to explore and to verify the utility of the five moral foundations (care, fairness, loyalty, authority, and purity) to differentiate between two understudied groups, namely, young offenders who use violence against their parents or dating partners, as well as to predict the extent to which these young people justify violence and perceive themselves as aggressive. Although both types of violence imply, by definition, harming someone (low care) and adopting a position of authority (high authority), we hypothesize a very different role for at least these two moral foundations. Our results support this idea and show a much lower regard for the five moral foundations, including care and authority, in the child-to-parent violence group (CPV; $N = 65$) than in the dating violence group (DV; $N = 69$). Additionally, the authority foundation was able to increase the effectiveness of correctly classifying the participants in one group or the other by 29%. Finally, care and authority, along with fairness, served to predict justification of violence and self-perceived aggressiveness. The moral foundations approach provides preliminary evidence to better understand two specific types of youth violence and extract preventive educational and treatment strategies.

Keywords: moral foundations, child-parent violence, dating violence, juvenile violence, authority (thesaurus)

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INTRODUCTION

Child-to-parent violence (CPV) and dating violence (DV) are early and apparently modern manifestations of violence and are especially alarming because the violent behavior manifests during the evolutionary development of the individual. There are many theoretical and practical approaches that have attempted to provide explanations for the different manifestations of violence that essentially involves harming someone (Baumeister, 1996; Herrenkohl et al., 2000). One of them has been related to power and authority (Lips, 1991; Rudman and Glick, 2008). Traditionally, most social systems have given power to men over women and parents over children (Wilson and Daly, 1992), and it is precisely in that direction that the majority of violence has been directed throughout history (Pinker, 2011). Only recently, and in the context of the so-called WEIRD societies (Western, educated, industrialized, rich, and democratic; Henrich et al., 2010), has the exercise of authority been called into question, and possibly, as a consequence of this, violence against children and violence against women have been decreasing worldwide (Straus and Gelles, 1986; Pinker, 2011). However, we see in Western countries that violence against women resist to

completely be eradicated despite the efforts invested, while violence against parents, which has traditionally been anecdotal, grows every day as a social problem.

Although neither of these two types of youth violence has been studied under the prism of the moral foundations theory (MFT; Haidt, 2007; Graham et al., 2011), it seems quite clear that in both cases the moral foundation of harm is involved, as is the exercise of authority beyond what is considered the norm in our society. In this paper, we explore the moral foundations that are important for two groups of violent youth, CPV and DV, as well as the ability of the moral foundations to differentiate between them and to predict criterion variables used in current psychological treatments (justification of the use of violence and self-perception of aggressiveness). This novel approach may broaden our understanding of this social problem through new variables, unexplored by the current literature on juvenile violence, and thus help us develop prevention and treatment programs based on them.

Two Types of Youth Violence With the Same or Different Moral Roots?

Child-to-parent violence seems to occur within the family and, contrary to common sense, it is the children, boys, and girls, who exercise violence against the natural authority of those who must guide and educate them (Cottrell and Monk, 2004; Gallagher, 2004; Walsh and Krienert, 2009; Routt and Anderson, 2011; Moulds and Day, 2017; Moulds et al., 2018). Dating violence occurs in the first dating relationships, and violence is exerted by one member in the couple, who asserts an authority over the other, with whom there are no strong commitments, no relationship of coexistence, no children in common, and no binding legal or economic relationships (Shorey et al., 2008; Foshee et al., 2009; Rubio-Garay et al., 2017; Leadbeater et al., 2019).

While the prevalence of child-to-parent violence has increased in the last decade to become a growing social problem (Moulds et al., 2016, 2018; Gallego et al., 2019), intimate partner violence is an old problem, present in different versions in all cultures throughout the history of mankind (Garcia-Moreno et al., 2005; Buss and Duntley, 2011). It seems that the prevalence of this kind of violence among youth and young adults (dating violence) exceeds 20% (Hickman et al., 2004; Niolon et al., 2015; Jennings et al., 2017; Wincentak et al., 2017), and given its severe sequelae for health (Campbell, 2002), the issue of dating violence has moved to the forefront of public health (Vagi et al., 2013).

Recently, the MFT has proposed that perceptions of what is right or wrong may be based on concerns other than care and fairness and has opened the spectrum of morality to other moral foundations, such as ingroup or loyalty, authority, and purity (Haidt, 2007; Haidt and Graham, 2007; Haidt and Joseph, 2008). The first two moral foundations are primarily focused on providing and protecting the rights and freedoms of individuals. These moral concerns are called the "individualizing foundations" and are characterized as follows: (1) care or distaste for the pain of others and (2) fairness or sensitivity to issues related to equality, justice, and rights. The three other moral foundations have a more controversial role and they have been related to idealistic violence and inter-group conflicts (Haidt and Graham, 2007; Graham and Haidt, 2012; Koleva et al., 2012). These are called the binding foundations and they focus on preserving the group as a whole by ties of loyalty, hierarchy, and common beliefs. They are characterized as follows: (3) ingroup, or the tendency to form coalitions and show loyalty; (4) authority, or the propensity to manifest hierarchical social interactions to preserve order within the group; and (5) purity, or the propensity to exhibit emotions of disgust in response to various biological and social contaminants. On top of these five moral foundations, people, groups, and societies create unique moralities by emphasizing different foundations to varying degrees.

It has been proposed that, at least theoretically, two of these moral foundations are breached in any violent act, since a violent act implies harming someone (care) and acting based on hierarchical social structures of dominance and subordination (authority) (Vecina et al., 2015). Empirically, recent studies have connected the five moral foundations with the violent behavior of adult men against their partners, and four different combinations of the moral foundations have been identified among them (Vecina and Chacón, 2019): "sacralizers," who score highly on the five moral foundations; "all for one," who score highly on the binding foundations, especially ingroup; "moral outsiders," with very low scores in every moral foundation; and "purists," who score highly on care, fairness, and purity. In a similar sample, it was also concluded that not paying enough attention to the care and fairness foundations, while simultaneously holding the authority and ingroup foundations in high regard, can provide a solid basis for upholding sexist attitudes (Vecina and Piñuela, 2017).

Although all the moral foundations have the potential to be relevant in explaining differences between violent young offenders, the care and authority foundations may be key to understand the deep differences between CPV and DV. In this respect, CPV has been defined by two criteria that can be linked directly to the care and authority foundations: (1) causing psychological, physical, or financial harm and (2) engaging in intentional acts to control the parents (Cottrell, 2001). DV has also been equally characterized by the same two elements: (1) the intentional provocation of real harm, whether physical, psychological, or sexual, and (2) the control or dominance of an individual by the partner through threats or coercive tactics (Rubio-Garay et al., 2015). However, and because it is not the same to usurp the legitimate authority of parents, who naturally must have more than their children, as it is to impose an illegitimate authority against a partner, who has equal rights and obligations in our current social system, we argue that this apparent similarity may rely on a different configuration of the moral foundations, where regard for care and authority could be lower in the CPV group than in the DV group. This lower moral profile in the CPV group may be more dangerous because it directly threatens the foundations of the current social order, in which parents rule in order to educate their children in essential restrictions that aim to promote cooperation and prevent harm to others.

A true commitment to the moral foundation of authority involves subjecting one's authority to limits, that of superiors, in a hierarchy recognized by all parties (Haidt and Joseph, 2004). Such an adaptive strategy for the social order seems to be absent in young people who use violence to impose their will against their parents' ineffective attempts to impose norms. These young people seem to pursue their individual and personal goals and claim their freedom and personal autonomy, without accepting the very limits that the foundation of authority represents: duty, order, and respect for legitimate authorities as parents, teachers, police, and so on. That fits best with amorality and selfishness or a pre-conventional morality stage (Kohlberg, 1978).

On the contrary, the violence of young men against their young female partners can be understood as an early exercise of men's authority over women, which makes sense under the traditional systems still in force in many countries and until recently in Western countries as well. These conservative social systems appeal to hierarchies not only where a man prevails over a woman but also where parents prevail over children, leaders over followers, bosses over employees, and so on. Current equality-based normative systems seek to overcome this inequality and qualify as sexist the exercise of authority by men. Despite the efforts being made in Western countries to socialize the new generations in gender equality, a considerable percentage of young people engage in asymmetric relationships in which caring for a partner may coexist with the exercise of controlling authority, leading to paradoxical states of unfairness and harm.

Objective and Hypotheses

The general objective of this study is to further our knowledge of two specific types of violence through the five moral foundations by answering this research question: Can the five moral foundations be used to differentiate two types of youth violence (DV and CPV), depending on the relevance attributed to them, as well as predict relevant criterion variables for the treatment of young offenders? Specifically, we argue that based on the MFT (Haidt and Joseph, 2004), there is a clear difference between the violence of the CPV participants, who were condemned for harming and not respecting the legitimate authority of their parents, and the violence of the DV participants, who were condemned for trying to impose their authority on someone deemed equal in our society. In the first case, young people dynamite the legitimate social system in which parents educate, or what is the same, limit the autonomy of their children, so as to socialize them in the existing norms. This kind of violence may have more serious consequences and reflect a kind of amorality similar to that found in samples of adult men convicted of intimate partner violence, called "moral outsiders" (Vecina and Chacón, 2019), and in psychopathic profiles (Walsh and Krienert, 2009). In our study, such dangerousness could be reflected in greater justification of violence and even in a greater self-perception as aggressive persons.

In the case of dating violence, it is argued that these young people intend to impose an illegitimate authority that the current social system does not grant them. It is not that they do not care about the care foundation, but rather that they may have to sacrifice it if the authority they believe they have over women is threatened. These exploratory objectives are articulated through the following hypotheses:

H1: There will be significant differences between the CPV group and the DV group at least in the care and authority foundations: those who used violence against their parents will demonstrate a lower regard for the care and authority foundations than those who used violence against their partner. There will be also significant differences between the groups in the criteria variables: the CPV group will perceive themselves as more aggressive and they will justify violence to a greater extent.

H2: At a minimum, the care and authority foundations will serve to correctly classify participants in their respective groups.

H3. At a minimum, the care and authority foundations will be relevant predictors of justification of the use of violence and self-perception of aggressiveness in both groups of young offenders.

MATERIALS AND METHODS

Participants

The participants were 136 young and violent individuals who had been sentenced in court for various violent acts either against their parents (CPV group) or against their young partners (DV group). None of them had been diagnosed with a psychiatric disorder. The study was approved by the university research ethics committee and by the penitentiary institution that had custody of the violent youths who made up the sample. Participation was voluntary and all data were collected under anonymous conditions. The participants, or their parents if they were underage, were asked by the research team to take part in this research project under conditions of anonymity. This is how we guaranteed, first, independence between the psychological treatment and the research and, second, their freedom to decide not to participate in the study. All participants or their parents signed an informed consent. Two cases were removed due to having 50% or more missing data, yielding 134 valid participants.

The CPV group was made up of 65 young offenders in court-mandated treatment and living in two different treatment centers. Their offenses can be considered serious because they met the criteria of having repeatedly used physical violence over time against one of their parents. Thirty-seven were boys (58%) and 28 were girls (42%). The mean age was 16 (SD = 1.15), with ages ranging from 14 to 20. Most were Spanish (71%), followed by Latin American (14%), European (7%), and other nationalities (7%). Fifty percent of the participants had finished intermediate-level studies (71%) and 14% only had a basic education. No gender differences involving the five moral foundations and the criterion variables were found in this CPV group. The analyses will thus consider the entire group of boys and girls.

The DV group was made up of 69 young male offenders attending court-mandated psychological treatment in lieu of prison, since they had no prior criminal record. Although there

is no consensus on the definition of dating violence, having a common judicial sentence guarantees that the violence exerted by the participants in the sample was similar and considerably serious. The average age of this group was 25 (*SD* = 3.75), with ages ranging from 18 to 29. This age range is appropriate to consider because it includes the periods of middle and late adolescence (Gutgesell and Payne, 2004). Fifty percent of the participants were Spanish, followed by Latin American (41%) and other nationalities (9%). Most of them had finished intermediate-level studies (73%) and 27% only had a basic level of education. None of them was married. Although young women can also perpetrate dating violence, as reflected in the literature (Archer, 2000; Dutton, 2007; Hettrich and O'Leary, 2007), this violence may be anecdotal, since we could find no psychological treatment group for women.

Instruments

The participants answered the short version of the Moral Foundations Questionnaire (Graham et al., 2011), which measures the degree to which individuals value culturally constructed virtues and concerns, built on each foundation through the Relevance and the Judgments subscales. The Relevance subscale contains two items from each of the five moral foundations (scale from 0 = *not at all relevant* to 5 = *extremely relevant*), e.g., "Whether or not someone suffered emotionally" for care and "Whether or not some people were treated differently from others" for fairness. The Judgment subscale also contains two items from each moral foundation (scale from 0 = *strongly disagree* to 5 = *strongly agree*), e.g., "I am proud of my country's history" for Loyalty, "Respect for authority is something all children need to learn" for authority, and "I would call some acts wrong on the grounds that they are unnatural" for purity. Cronbach's alpha values were low, but never lower than those reported by Graham et al. (2011). This is acceptable, considering how each scale contains only two items and the authors of the scales relied on heterogeneity to increase confidence that the foundation was maximally represented, instead of resorting to internal consistency via item redundancy.

In order to assess violent attitudes without arousing much social desirability, we asked participants how much they agree with the following sentence: "Sometimes you have to resort to violence if you don't want others to think you are dumb." They indicated their answer on a 6-point scale, ranging from 0 (*fully disagree*) to 5 (*fully agree*). This measure may be indicative of the justification to use violence.

In order to evaluate their sense of their own aggressiveness, the participants indicated how accurately the adjective "aggressive" described them on a 5-point Likert scale (0 indicating "never true for me" and 4 indicating "always true for me"). Accounting for the influence of biases on self-perception, we regard their answers as an accurate measure of their self-perceived aggressiveness.

Data Analysis

Three sets of data analysis have been used to test the hypotheses. First, comparisons of means allow us to determine possible differences in moral foundations between the groups (H1). A logistic regression analysis will then test the ability of the moral foundations to classify participants into one group or another (H2). Finally, a set of linear regression analyses will explore the utility of moral foundations as predictors of two closely related dependent variables: justification of violence and self-perception of aggressiveness. The data were analyzed with R version 3.5.1 (R Core Team, 2018) and the psych (Revelle, 2018) and DescTools (Signorell et al., 2019) packages.

RESULTS

As hypothesized (H1), there were statistically significant differences between the two groups of violent young participants, CPV and DV, in the care and authority foundations, with the CPV group scoring lower on care and authority than the DV group. These differences were medium and large, respectively, as evidenced by the effect size of more than half a standard deviation (see **Table 1**). In addition, there were significant differences in the remaining three moral foundations, such that the CPV group also gave less importance to fairness, ingroup, and purity than the DV group.

Also as hypothesized, there were even larger differences in the *justification of violence* and *self-perception as an aggressive person* criteria variables. The CPV group scored much higher than the DV group, meaning they justified the use of violence much more and consistently perceived themselves as more aggressive. The shapes of the distributions showed very different patterns (see **Supplementary Material**). Sixty-nine percent of the DV participants were grouped in the minimum value of the *justification of violence* variable, versus 29% in the CPV group. Similarly, most of the participants in the DV group (55%) exhibited low scores in the *self-perception as an aggressive person* variable (positive asymmetry), compared to 8% of the participants in the CPV group (negative asymmetry).

Regarding hypothesis 2, the results from the logistic regression confirmed that authority, but not care, was a significant predictor of belonging to the groups. **Table 2** shows the model, with authority as the sole predictor. This model was chosen after comparing it with two others: the null model, which served as a starting point, and the full model, which includes the five moral foundations (see **Supplementary Material**). A comparison between the models indicated that the best model was the one that includes only authority as a predictor, as the full model did not provide a significant gain in the reduction of residual deviance. The AIC and BIC indicators show the same preference. For this analysis, 12 participants (9%) were removed due to missing data in the predictors. A reanalysis using multiple imputations yielded virtually identical results (see **Supplementary Material** for details).

The coefficients of model 1 indicate that when the value for authority is zero, the ratio of cases in the CPV group to DV is $\exp(\beta 0) = 7.93$. That is, for every case of DV, there are 7.83 cases of CPV. The coefficient $\beta 1$ is negative, which indicates that the probability of being in the CPV group decreases as the value for authority increases. Regarding the precision in the classification, it was observed that it increases from 52.5 to 66.4% when using the authority variable.

TABLE 1 | Descriptors and *t*-tests for variables in the CPV and DV groups.

	Child–parent violence			Dating violence					
	Mean	**SD**	**α**	**Mean**	**SD**	**α**	***T***	***P***	***d***
Care	3.54	0.90	0.649	3.99	0.79	0.566	−3.01	0.003	−0.52
Fairness	3.63	0.94	0.701	3.95	0.69	0.367	−2.19	0.031	−0.38
Ingroup	3.25	0.95	0.400	3.77	0.96	0.565	−3.08	0.003	−0.54
Authority	2.23	1.07	0.542	3.18	1.11	0.639	−5.03	<0.001	−0.87
Purity	2.62	1.05	637	3.18	1.02	0.523	−3.12	0.002	−0.54
JustViol	2.20	1.85		0.68	1.27		26.3 (*)	<0.001 (*)	0.96
Aggressive	2.92	0.98		1.41	1.32		34.6 (*)	<0.001 (*)	1.31

All variables ranged 0–5 except Aggressiveness, ranging 0–4. α, Cronbach's α; d Cohen's d effect size. (*) For Justification of Violence and Aggressiveness, statistics and p values come from the Kruskal–Wallis rank sum test, as the t-test is not appropriate; see the details the ***Supplementary Material****.*

TABLE 2 | Logistic regression model where authority predicts belonging to the CPV group or the DV group.

(*n* = 122)	β	SE	*z*	*P*
Predictors				
Intercept	−2.0702	0.5480	−3.778	<0.001
Authority	0.7991	0.1884	4.241	<0.001

Regarding hypothesis 3, two regression analyses for each group of young offenders were performed, one on justification of using violence and another on self-perception of aggressiveness. We followed the same strategy as above, specifying a null model, then a model of interest, and finally a full model that considers all the moral foundations in the equations. **Table 3** shows the results of both regressions on authority (see **Supplementary Material** for details).

In the CPV group, the authority foundation was the only variable that helped to explain the variance in both justification of violence and self-perception of aggressiveness. The negative weight of the coefficient showed that a low regard for the authority foundation was related to a greater justification of violence and, consistently, to a greater self-perception of aggressiveness. The percentage of variance explained by authority was high for self-perception of aggressiveness and low for justification of violence, 21% and 6%, respectively.

In the DV group, care and fairness were relevant to explaining the justification of violence, but not the self-perception of aggressiveness, such that a high regard for the care foundation and a low regard for the fairness foundation seemed to explain the justification of violence. The percentage of variance explained by care and fairness was high (20%). The absence of significant weights among the five foundations to explain the self-perception of aggressiveness variable allows us to only partially confirm hypothesis 3.

DISCUSSION

The two types of youth violence analyzed in this paper are relevant social problems, with one growing (violence against parents) and the other persisting (violence against the dating partner). Based on recent research connecting the five moral foundations and intimate partner violence (Vecina and Piñuela, 2017; Vecina and Chacón, 2019), we generally hypothesize that the five moral foundations could also be relevant to portray two types of youth violence, that perpetrated against parents (CPV) and that exercised against the dating partner (DV). These new connections would not only serve to reinforce the applicability of the moral foundations theory to understand controversial attitudes and immoral behaviors but also help to broaden preventive and intervention strategies for these types of violence. This is especially relevant in a context where the effectiveness of interventions points toward short-term effects that decay over time (Gondolf, 2011; Stith et al., 2012; Jennings et al., 2017).

Child-to-parent violence and dating violence can be similarly read through the moral foundations of care and authority because they imply, by definition, harming someone and adopting a position of authority. However, our intuition and common sense say that it is quite different and even more serious to usurp the authority of the parents, who legitimately exercise it in order to educate their children, than to claim an authority over a dating partner that is merely residual in our current social system. In this respect, the young people who harm their parents did not learn from them to respect authority, so they show little regard for this moral foundation to the point that they observe no restrictions, not even to avoid harming their own parents. This idea was translated into a profile with lower scores for the care and authority foundations for the CPV group than for the DV group. It was also hypothesized that at least these two moral foundations would serve to correctly classify a significant percentage of the participants in their respective group and would have the potential to predict external criteria that are relevant for psychological treatments.

Consistently, a central conclusion that can be drawn from the results is that the two groups of violent young people (CPV and DV) seem to differ on all the moral foundations and, especially, on authority and care as hypothesized. The five moral foundations were much less important for those who used violence against their parents than for those who used violence against their partners. Regarding the role of the moral foundations to distinguish between the two groups of young people, it can be concluded that only the authority foundation was a significant predictor, such that as the authority score

TABLE 3 | Regression of justification of violence and aggressiveness for both the CPV and DV groups.

Justification of violence					Self-perception of aggressiveness				
(*n* = 58)	**β**	**SE**	***T***	***p***	**(*n* = 64)**	**β**	**SE**	***t***	***p***
CPV					**CPV**				
Intercept	3.316	0.534	6.21	<0.001	(Intercept)	3.902	0.265	14.708	<0.001
Authority	−0.472	0.218	−2.17	0.034	Authority	−0.424	0.108	−3.943	<0.001
$R^2 = 0.078$	$R^2_{adj} = 0.061$	$F(1,56) = 4.72$; $p = 0.034$			$R^2 = 0.224$	$R^2_{adj} = 0.206$	$F(1,55) = 15.55$; $p \leq 0.001$		
DV					**DV**				
(Intercept)	2.914	0.865	3.367	0.001	(Intercept)	1.995	1.181	1.688	0.098
Care	0.575	0.250	2.303	0.025	Care	0.492	0.312	1.574	0.122
Fairness	−1.145	0.277	−4.137	0.000	Fairness	−0.632	0.347	−1.823	0.075
$R^2 = 0.223$	$R^2_{adj} = 0.197$	$F(2,61) = 8.75$; $p \leq 0.001$			$R^2 = 0.074$	$R^2_{adj} = 0.033$	$F(2,46) = 1.83$; $p = 0.173$		

decreases, the probability of being classified in the CPV group increases. This variable improved the correct classification of the participants by a significant 29%. Finally, and regarding the utility of the care and authority foundation to predict relevant variables inside each group, it can be concluded that in the CPV group, a low regard for the authority foundation was related to both a higher justification of violence and higher self-perception of aggressiveness, while a high regard for care and a low regard for fairness significantly predicted a higher justification of violence in the DV group. The unexpected positive weight of the care foundation is discussed later.

A broader view portrays the group that used violence against their parents as potentially more dangerous than the group that used violence against their partners. They were younger, they show a low regard for all the moral foundations (care, fairness, loyalty, authority, and purity), and they even perceive themselves as much more aggressive and justify the use of violence more. If these violent young people do not care about anything, they have no qualms about pursuing their whims without any limit, no matter how immoral the consequences are. This could be understood as a risk configuration, similar to the profile of "moral outsiders" identified by Vecina and Chacón (2019) and to sociopathic profiles (Heide, 1995; Vaughn and Howard, 2005; Walsh and Krienert, 2009).

The DV participants demonstrated a significantly high regard for all the moral foundations, which makes us think of a risk configuration similar to the moral profile found in adult men convicted of intimate partner violence, called "sacralizers" (Vecina and Chacón, 2019). These young participants seem to care profoundly about both the individualizing foundations that protect individuals and the binding foundations that protect group interests. Conflictive situations can make them prioritize some foundations to the detriment of others within a social system that has remnants of sexism. The positive relationship between the care foundation and the justification for violence, which was not hypothesized but appeared in linear regression, can support this interpretation, as well as the result that none of the moral foundations predicted self-perception of aggressiveness in the DV group. For these young people who used violence against their dating partners could coexist in the same cocktail and without apparent contradiction something like that: "I care about my dating partner and I can impose the authority I think I have even if that is unfair and harms her."

All these exploratory results reflect a promising field of new research with larger samples and experimental approaches that would allow connecting the well-established moral foundations theory and different risk profiles for various types of violence and extracting lessons for education and socialization.

Study Limitations and Applications

The exploratory nature of this research and its cross-sectional approach do not allow us to draw definitive conclusions. Thus, no causal inferences can be made from this study. However, it is the first research that explores the five moral foundations in such sensitive samples of violent young people with condemnatory judicial sentences for different violent crimes. Nevertheless, and because this study constitutes a first attempt to explore CPV and DV in the MFT domain, a descriptive and comparative approach could be considered cautious. The results do support theoretical ideas and empirical data using ecological samples and may be considered sufficiently consistent to provide a solid basis for new studies. They point to some peculiar moral roots for different violent behaviors and how the authority foundation seems to differentiate them.

A more specific limitation refers to the wide range of ages of the two groups. This was unavoidable since the groups were under mandated psychological treatment in different centers and for different crimes, consistent with their age: residential for the CPV group of minors and non-residential for the DV group older than 18. It could be also said that the age, much lower in the group of young people who harm their parents, could explain all the differences found in this research, and this may indeed be so. However, age alone is not a variable that helps treat problems, while different configurations of the moral foundations may help to design more effective approaches to prevention and intervention. In this respect, our results have the potential to advance our understanding of the multiple causes of violence in truly problematic samples.

Thinking of young offenders who used violence against either their partners or their parents as having peculiar configurations of the five moral foundations may allow psychologists to incorporate new strategies that focus, for example, on increasing or decreasing the importance of certain moral foundations.

Although it seems quite clear that all of them harm someone, some may be doing it because they have little respect for the restrictions of the moral foundation of authority and others because they have too much. In the first case, it could be useful to reinforce the authority of parents and educational figures in our current social system. Their greater experience and development makes them the wisest option to address the uncertain future of new and still maturing generations. In the second case, there is an indisputable need to continue promoting equality and fair treatment between women and men, since current achievements in gender equality have not arisen spontaneously, but through multiple and wide-ranging efforts. However, it could be useful to add new elements to the current campaigns to reduce sexist attitudes, such as the clarification of values related to care, fairness, and authority, and to set priorities in case of conflict in favor of the first two.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found in the article/**Supplementary Material**.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Comisión de Calidad de la Facultad de Psicología de la UCM. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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Evaluation of the Executive Functioning and Psychological Adjustment of Child-to-Parent Offenders: Epidemiology and Quantification of Harm

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With the aim of ascertaining if child-to-parent offenders have impairments in the executive functions and psychological maladjustment, and to quantify the potential harm and epidemiology, a field study was designed. As for this, 76 juvenile offenders sentenced for child-to-parent violence were assessed in executive functions (Stroop tasks) and psychological adjustment (Minnesota Multiphasic Personality Inventory-Adolescent, MMPI-A). The results showed valid responses for 75 juveniles and that data were not generally biased in line with defensiveness or malingering (differential diagnosis in justice juvenile evaluations). In psychological adjustment, the results revealed a significantly higher maladjustment among offenders on all the basic clinical scales with 23% more symptoms of hysteria than the normative population, 37% more of depressive symptoms, 44% more of hypochondriac symptoms, 68% more of psychopathic deviation symptoms, 46% more of paranoid symptoms, 26% more of psychasthenic symptoms, 24% more symptoms of schizophrenia, 17% more symptoms of hypomania, and 13% more symptoms of social introversion. Epidemiologically, the prevalence rates of clinical deterioration were significantly greater than expected (0.05 in normative sample) in hypochondria (28.0%), depression (29.3%), hysteria (29.3%), psychopathic deviation (60%), paranoia (30.7%), psychasthenia (22.7%), and schizophrenia (25.3%). As for the cognitive functions, the offenders exhibited impairments estimated at 62.0% in word reading, 47.9% in color naming, 45.8% in color-word, and 11.9% in interference and a significantly higher prevalence of caseness than expected in word reading (65%), color naming (71%), and color-word (70.2%). The implications of the results for intervention are discussed.

Keywords: MMPI-A, stroop tasks, juvenile offender, prevalence, child-to-parent violence

INTRODUCTION

Over 60 years after Sears et al. (1957) drew attention to child-to-parent violence (CPV), there is a wealth of literature on domestic violence, particularly intimate partner violence, but research on CPV is paradoxically scarce. CPV is defined as violence exerted by a child on a parent, whereby a child is defined as person under the legal adult age of 18 years (it may be extended to < 21 years for reoffenders). This excludes CPV committed by offspring over 18, the vast majority of whom continue to live with parents. The literature has mainly focused in the predictors of CPV (e.g., age and gender of the perpetrator, parenting style, type of violence, exposure to family violence, parent-to-child violence, and socio-economic status) and the sociodemographic characteristics (e.g., age and gender) of the child-to-parent offenders (CPOs) (Gallego et al., 2019; Hoyo-Bilbao et al., 2020; Perez-Gramaje et al., 2020). The results have provided the identification of the risk factors of CPV, which are variables predicting the high probability of child-to-parent violent behavior, and to a much lesser extent risk-based protective factors, which are variables predicting a low probability of CPV among a risk group, or interactive protective factors, i.e., variables that nullifies the effect of the risk factors (Gallego et al., 2019; Cortina and Martín, 2020; Loinaz and Sousa, 2020; Loinaz et al., 2020). Both risk and protective factors are classified as either dynamic factors that are susceptible to intervention (e.g., parenting style and substance abuse) or static factors that are not susceptible to intervention (e.g., previous parent-to-child violence and gender). In offender intervention programs, dynamic factors are considered to be needs that must be the target of interventions. Cognitive behavioral intervention programs have proven to be the most effective in the intervention of juvenile and adult delinquency (Koehler et al., 2013; Arce et al., 2020), often targeting psychological maladjustment and cognitive competence as these needs are significant predictors of aggression, delinquency, and recidivism in delinquency (Wibbelink et al., 2017; Basanta et al., 2018; Perez-Gramaje et al., 2020). Remarkably, the contents of treatments for CPOs have been barely assessed, even though CPO interventions should be the primary objective according to judicial sentences. Of the array of needs identified in the literature on adult and juvenile violence and delinquency, psychological adjustment (Mayorga et al., 2020; Beaudry et al., 2021) and cognitive competency (Arias et al., 2020; Beelmann and Lösel, 2020) in CPOs have received little attention, and the results on CPV are inconsistent (Simmons et al., 2018).

Meta-analyses have found violent and antisocial psychopaths have deficits in neuronal activity and abnormal activity in the pre-frontal cortex (Yang and Raine, 2009). Moreover, impaired executive functioning is a predictor of recidivism in delinquency and, by extension, of life persistence (Miura and Fuchigami, 2017), and the magnitude of the deficit in executive functioning varies according to the type of antisocial behavior, i.e., an effect size ranging from $d = 0.94$ for criminality, 0.78 for delinquency, 0.36 for conduct disorder (CD) to 0.25 for psychopathy (Morgan and Lilienfeld, 2000). A more recent and broader meta-analysis that reported lower effect sizes for criminality, $d = 0.61$, and for delinquency, $d = 0.41$, meanwhile informed higher effect sizes for CD, $d = 0.54$, and for psychopathy, $d = 0.42$ (Ogilvie et al., 2011). On the basis of these results, the deficits in executive functioning can be quantified as 42.5% for criminality, 36.3% for delinquency, 17.7% for CD, and 12.4% for psychopathy in the meta-analysis of Morgan and Lilienfeld and 29.2% for criminality, 20.1% for delinquency, 26.1% for CD, and 20.6% for psychopathy in the meta-analysis of Ogilvie et al. These results were significantly different [95% confidence intervals (CIs) for the means did not overlap]; however, impairment in executive functions (EFs) was significant in all types of antisocial behavior (ASB) in both meta-analyses. The measure of EFs is a controversial issue since they are understood as either a series of cognitive processes and behavioral competences that regulate the execution of complex tasks or an anatomical concept that locates executive functioning in the frontal lobe. Though both concepts are intrinsically related, impaired executive functioning is associated with other areas of the brain, whereas the optimum executive functioning involves the entire brain (Collette et al., 2005). Regardless of the perspective, the most relevant from a practical point of view is not so much the anatomical location of injury but impairments in EFs. Though the measure of cognitive processes and skills requires a conceptual model widely accepted by the scientific community, it has not been developed owing to the lack of consensus regarding the cognitive processes and skills involved in EFs (Jurado and Rosselli, 2007) and the absence of a reliable measurement instrument (Ogilvie et al., 2011). On the ground of these limitations, Morgan and Lilienfeld (2000) reviewed the well-validated tests for measuring EF impairment (i.e., the category test of the Halstead-Reitan Neuropsychological Battery, the qualitative score on the Porteus Maze Test, the Stroop Interference Test, Part B of the Trail Making Test, the perseverative error score on the Wisconsin Card Sorting Test, and Verbal Fluency Tests) and found the highest sensitivity for the Stroop and Mazes tests.

Bearing this context in mind, a field study was carried out on juveniles convicted of CPV in order to ascertain if the deficits in executive functioning observed in individuals exhibiting antisocial behavior were also observable in CPOs and to quantify the potential harm and epidemiology. Moreover, the psychological adjustment of this population of juveniles was assessed, the harm to mental health quantified, and the clinical epidemiology examined.

METHODS

Participants

A total of 76 correctional juveniles convicted of CPV, 51 males (67.1%) and 25 females with an age range of 14–20 years ($M = 16.33$, SD = 1.10), participated in this study. In terms of sentencing, three juveniles were serving custodial sentences, seven were in a Secure Children's Home, 61 on Youth Rehabilitation Orders, and five on probation. Of the 76 convicted juveniles, 23 were CPV reoffenders.

Procedure and Design

The data were gathered in Galicia (northwest of Spain) from court files and from the Young Offender Institutions (YOIs) and

the Youth Offending Teams (YOTs) during judicial proceedings or the reception stage in the YOI. The data were obtained with written informed consent of the courts, YOIs, and YOTs and were anonymized. The data was stored and processed in accordance with the Spanish Data Protection Law. Only cases where the conviction was exclusively related to CPV were included. The design sensitivity analysis for the comparison of means with a one-sample *t*-test of a sample of 75 subjects for a medium effect size ($d = 0.5$) showed the probability of detecting ($1 - \beta$) significant differences ($\alpha < 0.05$) was 99.6%. The design sensitivity for the contrast of cases with a constant (clinical deterioration, and moderate and clinical deterioration) showed that, for a medium effect size [odds ratio *(OR)* = 2.47] and a sample of 75 subjects, the probability of obtaining a significant rate (one tailed: higher prevalence among CPOs) was 64.4% for a constant of 0.05 and 85.0% for a constant of 0.10.

Measurement Instruments

Psychological adjustment was evaluated using the Minnesota Multiphasic Personality Inventory version for adolescents, the MMPI-A, which is the instrument of reference in forensic evaluation and for judicial samples. This instrument not only measures psychological adjustment on nine (masculinity-femininity scale was omitted as it is not a measure of psychological adjustment; Graham, 2011) basic clinical scales [i.e., hypochondriasis (Hs), depression (D), hysteria (Hy), psychopathic deviate (Pd), paranoia (Pa), psychasthenia (Pt), schizophrenia (Sc), hypomania (Ma), and social introversion (Si)] but also the consistency [i.e., True Response Inconsistency (TRIN) and Variable Response Inconsistency (VRIN) scales and |*F1–F2*| index] and accuracy [i.e., the self-unfavorable reporting of psychopathology scales (*F*, *F1*, *F2*, and *K* scales and the *F-K* index) and the self-favorable reporting of psychopathology (i.e., *L* and *K* scales and the *F-K* index)] of item responses (Greene, 2011). Indeed, in this type of population, malingering (American Psychiatric Association, 2013), defensiveness (Fariña et al., 2014), and a combination of both should always be suspected (Osuna et al., 2015). The Spanish adaptation and norms of the MMPI-A were employed (Butcher et al., 2003).

The Spanish adaptation of the Stroop Color-Word Test (Golden, 2005) was used to assess executive functioning (cognitive impairments). It consists of three tasks that subjects have to read as fast as possible in 45 s: two congruent and one incongruent. In the congruent conditions, subjects are required to read the names of colors printed in black ink (word reading) and to name the presented colors (color naming). In the incongruent task (color-word), words are printed in an inconsistent color ink, and participants are required to name the color of the ink. The accounts of the read words (W), colors (C), and color-words (CW) are the raw scores. The predicted color-word interference score is calculated from

$$CW' = (C \times W)/(C + W)$$

The difference between the account of color-word score and predicted color-word score is the interference score, $IS = CW - CW'$.

Data Analysis

The means of the CPOs in the psychological dimensions and the Stroop tasks were compared with test values (one-sample *t*-test) taken from the normative population (Spanish norms) and the means of justice juvenile samples. The normality of the distributions of the variables was verified with asymmetry and kurtosis (<-2 and 2; George and Mallery, 2010). In this study, the justice juvenile samples and the normative population were preferred to a control group as they were less biased than a control group (Schmidt and Hunter, 2015; Novo et al., 2019). Moreover, the study of cases should be carried out with the normative population. Although many comparisons were computed, multiple corrections test was not performed as the grouping factor had one or two levels. Effect sizes were calculated in Cohen's *d* and were interpreted in terms of the probability of superiority of the effect size (PS_{ES}; Monteiro et al., 2018). The quantity of harm on the clinical dimensions was calculated by interpreting the effects in the binomial effect size display (BESD; Rosenthal and Rubin, 1982), using *r* (Corrás et al., 2017). The probability of CPOs having more symptoms than the normative population was estimated by the area under the curve (AUC), whereas the probability of asymptomatic CPOs was determined by transforming the effect size to *Z* score and then estimating the probability of an inferiority score (PIS), i.e., estimating the probability of the CPO sample (normal distribution; non-significant K-S for the clinical scales) obtaining a score below the mean of the normative population (normal distribution), PIS = 1 – [NORMSDIST(*Z*)]. For this proportion, the confidence interval (CI) was obtained, and if the CI comprises zero, the rate of asymptomatic cases was zero; if the CI comprises 0.05, it was not significant (trivial); and if the lower limit of the CI was above 0.05, it was significant.

The case study was analyzed (*Z* scores) contrasting the observed probability with a test value: 0.05 for clinical deterioration and suspected malingering (corresponding to a *T* score of $\geq$ 66.45 or $\leq$ 33.55) and 0.10 for clinical and moderate deterioration (corresponding to a *T* score of 62.8). Effect sizes were estimated in odds ratio, and the magnitude was interpreted in terms of epidemiology with the effect incremental index (EII; Redondo et al., 2019), $(p_1 - p_2)/p_1$ where p_1 is the observed probability of caseness in the CPO sample and p_2 is the probability of caseness in the normative population (test value, 0.05 or 0.10). The result of the equation multiplied by 100 was the percentage increase of caseness among the sample of CPOs above the normative sample.

As for *F-K* index, norms were not available. Thus, *F* and *K* raw scores were standardized in *Z* scores with the Spanish norms, and the AUC of each score was computed. If the sum of both AUCs was over 0.90, it meant that 90% of the total scores were under the curve, the remaining 10% being out of normality. This cut-off score (±0.90, depending on the sign of the difference between *F* and *K*) was the test value for mean comparisons and the criterion for defensiveness (negative difference) or malingering (positive difference). Likewise, the reliability of this index has not been reported in the literature. Thus, the reliability of the composite of *F* and *K* was computed with the formula s from Mosier (1943).

RESULTS

Invalid Protocols

The protocols of the MMPI-A were scrutinized to determine if they had been subjected to extreme acquiescence (TRIN $T \geq 80$), random responses (VRIN $T \geq 80$; *F*, *F1*, or *F2* $T \geq 120$), lack of collaboration (>10 did not respond or double response items) or outliers [*L* raw score (rs) > 12 or *K* rs > 29, i.e., percentile 99.9], in order to eliminate these from the study (Graham, 2011; Greene, 2011; Arce et al., 2015). A case was excluded from the study as the VRIN and TRIN were over a *T* score of 80 (random responses). Likewise, the Stroop tasks were reviewed with the aim of detecting lack of cooperation (inability to read; incomplete tasks) or invalid protocols (raw color-word scores higher than raw word reading or color naming scores). One protocol was identified as invalid and eliminated (the same as in MMPI-A).

Item Response Consistency

TRIN and VRIN validated all the protocols (rs < 14), and the sample of CPOs showed a consistent response pattern (|*F1*–*F2*|) throughout the test and the measure (test value = 16.45, i.e., in *T* scores, 50 ± 16.45 comprises 90% of the distribution, ruling out 5% in each tail), $t(74) = -7.06$, $p < 0.001$, $d = 0.82$. Nevertheless, not all of the offenders maintained this response pattern throughout the test. In fact, the probability of finding scores above 16.45 in the normative population was 10%, while for CPOs, it was 20% ($n = 15$), with the observed probability being higher than expected for the normative population, $Z(N = 75) = 2.89$, $p < 0.01$, OR = 2.0.

Item Response Accuracy

First, the reliability of the *F-K* index (reliability of the weighted composite) was calculated to determine both the reliability and the estimated error. The results showed a good reliability of 0.788, accounting for the 62.1% of the variance.

The scales and indexes for the measurement of defensiveness, *L* and *K* scales and the *F-K* index (see **Table 1**), reported that the population of CPOs did not have biased responses in line with defensiveness (negative significant *t*-scores with a cut-off score for defensiveness, i.e., $T = 66.45$ for the scales and rs = −22.48 for the *F-K* index). Likewise, the *F*, *F1*, and *F2* scales and the *F-K* index for the assessment of malingering showed CPOs did not have biased responses in line with malingering. Nevertheless, the case study (see **Table 1**) found a significantly high rate of cases (difference between the observed proportion of suspect of malingering or defensiveness and the predicted proportion in normative sample with the cut-off scores, 0.05) in the *L* (defensiveness) and *F*, *F1*, and *F2* (malingering or severe psychopathology) scales. However, the rate of cases was significantly higher in *F1* than in *F2*, $\chi^2(1, N = 75) = 18.38$, $p < 0.001$. Thus, the classification of malingering or severe clinical cases was mainly associated with the basic clinical scales (*F1*) as compared to the complementary and content scales (*F2*). Moreover, low scores on the *K* scale were related to malingering. However, this criterion on the MMPI-A has not been assessed, so there is no classification cut-off score. Thus, the statistical criterion for the classification of abnormality ($T \leq 33.55$ resulting from 50 to 16.45, which classified 5% of the normative distribution below this level) was used to quantify the rate of cases in CPOs ($n = 6$, 8%), which was not significant, $Z(N = 75) = 1.19$, *ns*.

Stroop protocols were scrutinized for suspected malingering (i.e., color naming *T*-scores over 40; color-word and word reading *T*-scores lower than 40; color and word *T*-scores <40; higher raw scores in color or color-word than in word reading; higher raw scores in color-word than in color naming). Three protocols were classified by these criteria as suspected malingering (alternative hypothesis: low intelligence), a trivial contingency (< 0.05).

Psychological Adjustment

The results (see **Table 2**) of the mean comparison between the CPOs with the mean of the normative population ($T = 50$) as test value revealed significantly higher values on all the basic clinical scales. Clinically, CPOs had (*r*) 23% more symptoms of hysteria than the normative population, 37% more depressive symptoms, 44% more hypochondriac symptoms, 68% more psychopathic deviation symptoms, 46% more paranoid symptoms, 26% more psychasthenic symptoms, 24% more symptoms of schizophrenia,

TABLE 1 | One-sample *t*-test for the comparison of the scales and indexes of malingering and defensiveness with a test value (cut-off score) and the contrast of the observed probability of malingering or defensiveness classification among CPOs with a constant (0.05).

Scale/index	Cut-off score	*t*	*M*	*d*	*f*(*p*)	*Z*	*OR*
L	≥66.45	−9.86***	53.55	−1.14	9(0.120)	2.78**	2.40
F	≥66.45	−5.78***	58.95	−0.67	19(0.253)	8.06***	5.06
K	≥66.45	−12.55***	49.44	−1.45	5(0.067)	0.68	1.34
K	≤33.55	11.72***	49.44	1.37	6(0.080)	1.19	1.60
F1	≥66.45	−2.47*	62.93	−0.28	32(0.413)	14.42***	8.26
F2	≥66.45	−10.25***	54.63	−1.18	9(0.120)	2.78**	2.40
F-K$^+$	≥0.90	−10.84***	0.22	−2.64	5(0.067)	0.68	1.34
F-K	≤-0.90	17.77***	0.22	3.45	0(0.000)	–	–

*df(74). M, mean of the CPO group; d, Cohen's d; Z, zeta for the difference between the observed proportion and a constant (0.05); OR, odds ratio effect size; $^+$F-K index was transformed to area under the curve (AUC); *p < 0.05; **p < 0.01; ***p < 0.001.*

TABLE 2 | One-sample *t*-test for the comparison of CPOs with the mean of the normative population as test value ($T = 50$) in the basic clinical scales.

Scale	*t*	*M*	*d*	PS_{ES}	*r*	AUC	PIS(95% CI)
Hypochondriasis	4.17***	56.37	0.48	0.266	0.23	0.633	0.316(0.211, 421)
Depression	6.95***	59.90	0.80	0.432	0.37	0.714	0.212(0.119, 304)
Hysteria	8.57***	61.25	0.99	0.516	0.44	0.758	0.161(0.078, 0.244)
Psychopathic deviation	15.86***	67.81	1.83	0.802	0.68	0.902	0.034(−0.001, 0.075)
Paranoia	8.92***	60.95	1.03	0.534	0.46	0.767	0.152(0.071, 0.233)
Psychasthenia	4.75***	57.02	0.55	0.304	0.26	0.651	0.291(0.188, 0.394)
Schizophrenia	4.34***	56.31	0.50	0.274	0.24	0.638	0.309(0.204, 0.414)
Hypomania	3.01**	52.99	0.35	0.198	0.17	0.598	0.363(0.254, 0.472)
Social introversion	2.27*	52.90	0.26	0.142	0.13	0.573	0.397(0.286, 0.508)

*df(74). M, mean of the CPO group; d, Cohen's d; PS_{ES}, probability of superiority of the effect size; r, incremental in clinical symptoms; AUC, area under the curve; PIS(95% CI), probability of an inferiority score (95% confidence interval); *p < 0.05; **p < 0.01, ***p < 0.001.*

TABLE 3 | Caseness in the MMPI-A basic clinical scales among CPOs.

Scale	$f[p(95\%\ CI)]_1$	Z_1	OR_1	EII_1	$f(p)_2$	OR_2	Z_2	EII_2
Hypochondriasis	21[0.280(0.178, 0.382)]	9.14***	5.62	0.821	23(0.307)	3.07	5.98***	0.674
Depression	22[0.293(0.190, 396)]	9.54***	5.86	0.829	30(0.400)	4.00	8.66***	0.750
Hysteria	22[0.293(0.190, 396)]	9.54***	5.86	0.829	39(0.520)	5.20	12.12***	0.808
Psychopathic deviation	45[0.600(0.489, 0.711)]	21.85***	12.00	0.917	46(0.613)	6.13	14.81***	0.837
Paranoia	23[0.307(0.203, 0.411)]	10.33***	6.14	0.837	30(0.400)	4.00	8.66***	0.750
Psychasthenia	17[0.227(0.132, 0.322)]	7.03***	4.54	0.779	26(0.347)	3.47	7.13***	0.712
Schizophrenia	19[0.253(0.155, 0.351)]	7.94***	5.06	0.802	23(0.307)	3.07	5.98***	0.674
Hypomania	5[0.067(0.010, 0.124)]	0.79	1.34	0.254	8(0.107)	1.07	0.20	0.065
Social introversion	6[0.080(0.019, 0.141)]	1.19	1.60	0.375	18(0.240)	2.40	4.04***	0.583

*df(74). $f[p(95\%\ CI)]_1$, frequency of clinical deterioration[observed probability (95% confidence interval)]; Z_1, zeta score for the difference between the observed proportion of clinical deterioration among CPOs and a constant (0.05, predicted probability of clinical deterioration in the normative sample); OR_1, odds ratio for the clinical deterioration; EII_1, effect incremental index for clinical deterioration; $f(p)_2$, frequency of clinical and moderate deterioration(observed probability); OR_2, odds ratio for clinical and moderate deterioration; Z_2, zeta score for the difference between the observed proportion of clinical and moderate deterioration among CPOs and a constant (0.10, predicted probability of clinical and moderate deterioration in the normative sample); EII_2, effect incremental index for clinical and moderate deterioration; ***p < 0.001.*

17% more symptoms of hypomania, and 13% more symptoms of social introversion. The magnitude of the effect (see PS_{ES} in **Table 2**), that is, harm in mental health markers, was above 26.6% of all possible in hypochondria, 43.2% in depression, 51.6% in hysteria, 80.2% in psychopathic deviation, 53.4% in paranoia, 30.4% in psychasthenia, 27.4% in schizophrenia, 19.8% in hypomania, and 14.2% in social introversion.

Moreover, the probability of CPOs having more (AUC) hypochondriac symptoms than the normative population was 63.3, 71.4% more depression, 75.8% more hysteria, 90.2% more psychopathy, 76.7% more paranoia, 65.1% more psychasthenia, 63.8% more schizoid, 59.8% more hypomania, and 57.3% more social introversion.

Epidemiologically (see **Table 3**), the percentage of clinical deterioration ($T \geq 66.45$ i.e., percentile 95) in hypochondria (28.0%), depression (29.3%), hysteria (29.3%), psychopathic deviation (60%), paranoia (30.7%), psychasthenia (22.7%), and schizophrenia (25.3%) was significantly higher (Z_1 in **Table 3**) than expected (0.05 in normative sample). Thus, the rate of caseness in hypochondria was 5.62 times higher than expected (OR_1 in **Table 3**), 5.86 times higher in depression, 5.86 times higher in hysteria, 12.00 times higher in psychopathy, 6.14 times higher in paranoia, 4.54 times higher in psychasthenia, and 5.06 times higher in schizophrenia. The magnitude of the effect indicated higher rates of caseness than expected (0.05 in normative sample) of 82.1, 82.9, 82.9, 91.7, 83.7, 77.9, and 80.2%, in hypochondria, depression, hysteria, psychopathy, paranoia, psychasthenia, and schizophrenia, respectively. Moreover, the proportion of clinical and moderate deterioration ($T \geq 62.8$, i.e., percentile ≥ 90) was significantly higher than expected (0.10 in the normative sample) in the same clinical dimensions and in social introversion (Z_2 in **Table 3**). Succinctly, CPOs experienced 3.07 times more clinical or moderate deterioration in hypochondria (OR_2 in **Table 3**) than the general population, 4.00 times more depression, 5.20 times more hysteria, 6.13 times more psychopathic deviation, 4.00 times more paranoia, 3.47 times more psychasthenia, 3.07 times more schizophrenia, and 2.40 times more social introversion. This implied an increase in the rate of cases (EII_2 in **Table 3**) over the baseline (0.10 in normative sample) of 67.4% for hypochondriasis, 75.0% for depression, 80.8% for hysteria, 83.7% for psychopathic deviation, 75.0% for paranoia, 71.2% for psychasthenia, 67.4% for schizophrenia, and 58.3% for social introversion. Nevertheless, the probability of CPOs being asymptomatic (less symptoms than the mean

of the normative sample; see PIS in **Table 2**) was 31.6% for hypochondriasis, 21.2% for depression, 16.1% for hysteria, 3.4% for psychopathic deviation, 15.2% for paranoia, 29.1% for psychasthenia, 30.9% for schizophrenia, 36.3% for hypomania, and 39.7% for social introversion. These rates were significant, with the exception of psychopathic deviation with an asymptomatic rate of zero (the confidence interval comprises 0).

Furthermore, the results of the comparison of the means of CPOs with the test value of clinical cases ($T = 66.45$) showed this population (see **Table 4**) was characterized by psychopathic deviation (the mean is over the criterion for clinical deterioration classification, 66.45, as the lower limit of the confidence interval is above this cut-off score); for hysteria and paranoia, CPOs were in the region of moderate deterioration (the confidence interval of the mean for CPOs was 62.8, the criterion for the classification of moderate deterioration). However, hypochondriasis, depression, psychasthenia, schizophrenia, hypomania, and social introversion were within the limits of normality (the upper limit of the confidence intervals is under 62.8).

The comparison of the mean of the CPOs with the weighted-by-sampling-size mean—from 21 to 23 samples and none of CPOs—of the juvenile justice samples (Baum et al., 2009) showed significantly more hypochondriac, depressive, hysteric, psychopathic, paranoid, and psychasthenic clinical symptoms among CPOs (see **Table 5**). In terms of the increase in clinical symptoms, CPOs reported 20.0% more hypochondriac, 24.7% more depressive, 46.1% more hysteric, 42.2% more psychopathic deviation, 16.3% more paranoid, and 14.8% more psychasthenic symptoms than juvenile justice samples. Conversely, CPOs reported less hypomanic clinical symptoms than justice juveniles, specifically 15.3% less hypomanic symptoms.

Executive Functioning

The results showed CPOs had impairment in word reading, color naming, color-word, and interference (see **Table 6**). The magnitude of the impairment (r) was estimated as 62.0% in word reading, 47.9% in color naming, 45.8% in color-word, and 11.9% in interference score.

The study of cases ($T \leq 40$; see **Table 7**) revealed a significantly higher than expected prevalence in the general population of caseness (0.1587) in word reading, color naming, and color-word, but not in resistance to interference. The magnitude of the deterioration of a medium effect size ($OR > 2.47$) indicated an increase (EII) in the observed proportion of impairment over the baseline of 65% in word reading, 71% in color naming, and 70.2% in color-word.

TABLE 4 | One-sample *t*-test for the mean comparison of CPOs with the cut-off score for caseness as test value ($T = 66.45$) in the basic clinical scales.

Scale	*t*	*M*(95% CI)	*d*
Hypochondriasis	−6.61***	56.37(53.37, 59.37)	−0.76
Depression	−4.59***	59.90(57.10, 62.70)	−0.53
Hysteria	−3.97***	61.25(58.68, 63.52)	−0.46
Psychopathic deviation	1.21	67.81(65.61, 70.01)	0.04
Paranoia	−4–48***	60.95(58.54, 63.36)	−0.52
Psychasthenia	−6.38***	57.02(54.12, 59.92)	0.0.74
Schizophrenia	−6.98***	56.31(53.47, 59.15)	−0.81
Hypomania	−13.56***	52.99(51.05, 54.93)	−1.56
Social introversion	−10.62***	52.90(50.39, 55.41)	−1.23

*df(74). M(95% CI), mean of the CPO group(95% confidence interval); d, Cohen's d; ***p < 0.001.*

TABLE 6 | One-sample *t*-test for the mean comparison between CPOs and the cut-off score for impairment ($T = 40$) as test value in the Stroop tasks.

Variable	*t*	*M*	*d*	*r*
Word reading	−13.76***	39.78	−1.08	−0.620
Color naming	−9.08***	39.25	−1.07	−0.479
Color-Word	−8.86***	40.29	−0.97	−0.458
Interference score	−2.06*	48.18	−0.19	−0.119

*df(74). M, mean of the CPOs; d, Cohen's d; r, incremental in clinical symptoms; *p < 0.05; ***p < 0.001.*

TABLE 5 | One-sample *t*-test for the mean comparison of CPOs with the mean of juvenile justice samples as test value in the basic clinical scales.

Scale	*t*	M_{CPO}	M_{JJS}	*d*	*r*
Hypochondriasis	3.54***	56.37	50.97	0.41	0.200
Depression	4.46***	59.90	53.55	0.51	0.247
Hysteria	8.99***	61.25	49.45	1.04	0.461
Psychopathic deviation	8.03***	67.81	58.79	0.93	0.422
Paranoia	2.89**	60.95	57.40	0.33	0.163
Psychasthenia	2.61*	57.02	53.16	0.30	0.148
Schizophrenia	0.97	56.31	54.90	0.11	0.055
Hypomania	−2.71**	52.99	55.68	−0.31	−0.153
Social introversion	1.66	52.90	50.78	0.19	0.095

*df(74). M_{CPO}, mean of the CPO group; M_{JJS}, mean of the juvenile justice samples; d, Cohen's d; r, incremental in clinical symptoms; *p < 0.05; **p < 0.01; ***p < 0.001.*

TABLE 7 | Caseness in the Stroop tasks among CPOs.

Variable	*f(p)*	*Z*	*OR*	EII
Word reading	34(0.453)	6.98***	2.85	0.650
Color naming	41(0.547)	9.20***	3.45	0.710
Color-word	40(0.533)	8.87***	3.36	0.702
Interference score	10(0.133)	−0.61	0.83	−0.162

*Classification criterion as impairment: T < 40; f(p), frequency of impairment(proportion); Z, zeta score for the difference of the registered proportion of impairment among CPOs with a constant (0.1587, expected probability for a T score of 40); OR, odds ratio; EII, effect incremental index; ***p < 0.001.*

DISCUSSION

The generalization of the results is subject to limitations that should be borne in mind. First, the sensitivity of the design for the case study was not optimum ($\alpha/\beta \neq 1$) and biased against finding significant ratios of clinical deteriorate caseness ($1 - \beta < 0.80$). Thus, the significance of clinical deterioration caseness may be higher than found, so special attention should be paid to CIs. Second, although general and intended malingering and defensive responding was ruled out, the combination of both should be suspected in the case study as indicators of malingering and defensiveness may be insufficient by themselves (Osuna et al., 2015). Third, the Stroop tasks involve relatively simple tasks in experimental settings. The direct generalization of the results from experimental settings to real context is problematic. Thus, subjects who do not display impairment on Stroop tasks may have difficulties in everyday tasks requiring executive control (Fariña et al., 1994).

The CPOs cooperated with the psychological evaluation (Cannot Say Scale < 10) and exhibited a consistent response pattern (TRIN and VRIN rs < 14). Nevertheless, a significant number of CPOs changed their response style throughout the test. In all cases ($n = 15$), *F1* was greater than *F2* ($> +16.45$); as *F1* and *F2* inform of suspected malingering, this index indicated the suspicion of malingering was greater on the basic clinical scales (*F1*) than on the content and complementary scales (*F2*). However, as it is easier to malinger on the content and complementary scales than on the basic clinical scales (Greene, 2011), the change in response style cannot be attributed to intentional manipulation, but rather to response characteristics of the people under evaluation (alternative hypothesis). Succinctly, an intentional change in response style was ruled out.

Likewise, CPOs' item responses were accurate, i.e., were not biased either in terms of malingering with the presence of psychopathology or socially undesirable characteristics or in defensiveness. Moreover, the clinical profiles ruled out two key malingering strategies (Vilariño et al., 2013; Rogers, 2018): indiscriminate grouping of symptoms (no reported harm in all of the disorders; in fact, hypochondriasis, depression, psychasthenia, schizophrenia, hypomania, and social introversion report normality) and symptom severity (participants reported no severe disorder, $T < 90$). In short, the systematic tendency to malinger was ruled out in CPOs, i.e., a diagnostic criterion for CD and a differential diagnosis for PTSD in forensic setting (American Psychiatric Association, 2000, 2013), a diagnosis with significant rates [61.7% (95% CI 55.4–67.9%) of CD and 8.6% (95% CI 6.4–10.7%) of PTSD] among juvenile offenders (Beaudry et al., 2021). Likewise, systematic defensiveness (defensiveness may consist in denial of symptoms and/or the adoption of desirable characteristics—social desirability—to mask an unfavorable image; Arce et al., 2015; Rogers, 2018) was ruled out in CPOs: *L*, *K*, and the *F-K* index ruled out the suspicion of defensiveness.

Nonetheless, a significant number of CPOs were classified by the *F* scale (66 items) and by the *F1* (33 items) and *F2* (33 items) scales that are subdivisions of the *F* scale as suspected malingering, but not by the *K* scale and the *F-K* index. As only one indicator classified malingering, the *F* scale (*F1* and *F2* were part of *F* and would lead to a duplicity of measures if counted independently), this criterion was insufficient for suspecting malingering (Graham, 2011; Greene, 2011; Fariña et al., 2014; Arce, 2018), meaning other alternative hypotheses had to be considered: inconsistent response pattern (previously ruled out) and severe psychopathology (Greene, 2011; Arce, 2018). As the strategies of severity and the indiscriminate grouping of symptoms (discriminant validity) were ruled out, and the reported clinical profiles were consistent with those registered in juvenile justice samples (convergent validity; Baum et al., 2009), the alternative hypothesis to malingering, severe psychopathology, was accepted (Arce, 2018). As for defensiveness, the *L* scale classified a significant number of CPOs as suspected of social desirability response bias (denial of personal faults; Rogers, 2018). Once again, as only one indicator of defensiveness (*K* and *F-K* do not classify significantly defensiveness) was significant, it was insufficient for classifying CPOs as defensiveness biased responses (Arce et al., 2015).

Clinically, CPOs experience more symptoms on the basic clinical dimensions than the normative population, but only report clinical deterioration in psychopathic deviation (unreliable, egocentric, and irresponsible; unable to learn from experience and to plan ahead; problems with family members and authority; anger toward others; and problematic interpersonal relations in large interactions and under stress); and moderate deterioration in hysteria (naive, self-centered, denying any problem, exhibitionist, extroverted, and superficial) and paranoia (highly sensitive to criticism and to personalize the actions of others toward themselves). Furthermore, CPOs report more clinical maladjustment than other juvenile justice samples, which is characterized by psychological problems (Baum et al., 2009; Marcos et al., 2020; Beaudry et al., 2021). Hence, the population of CPOs are a clinical population experiencing more deterioration than other samples of juvenile justice. Epidemiologically, the observed prevalence of clinical and moderate deteriorated caseness was extremely high (incremental rate above baseline > 67.4%) in all the clinical dimensions excluding hypomania and social introversion. Thus, clinical and moderate caseness were diverse and comorbid (or multi-comorbid).

The results of the CPO population in Stroop tasks suggest an impairment in word reading, color naming, and color-word tasks, as well as in interference. These results were linked to deficits in working memory (Long and Prat, 2002); dysfunctions in selective attention (Fanti et al., 2016); poor cognitive flexibility or dysfunctions in cognitive inhibition (Lee and Orsillo, 2014); and poor abilities of goal formation and planning, carrying out goal-directed plans, and effective performance (Jurado and Rosselli, 2007). That is, poor skill at inhibiting responses linked to stimuli requiring the suppression of automatic responses (Herrero et al., 2019). Additionally, the case study has shown a significantly high rate of caseness among CPOs. These neuropsychological impairments appear to be linked to the onset, maintenance, and abandonment of antisocial behavior (Séguin, 2009).

Finally, the comorbidity of a clinical disorder with deficits in executive functioning is a characteristic of the CPO population. As the clinical intervention and training of executive functions are effective, and cognitive bias may play a role in the maintenance of psychopathology (Mogg and Bradley, 2005; Soriano et al., 2020), a key objective of interventions with CPOs should be the clinical treatment and the training of cognitive functions necessary for self-regulation and the regulation of socially appropriate behavior.

Future research should be focused to ascertain if impairments in EFs are characteristic of juvenile offenders (or offenders in general) or specific to CPOs and if the deficits in psychological adjustment and EFs are combined with deficits in social and cognitive competence.

DATA AVAILABILITY STATEMENT

All relevant data are within the article and its supporting information files.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants' legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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