

Recollections of Maternal and Paternal Punitive Discipline in Childhood and Violent Attitudes and Behaviors in Adulthood: A Mediation Model

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This cross-sectional retrospective study on a convenience sample of 973 Greek undergraduate students examined whether the violent socialization in childhood and the criminal history in adolescence would be mediators between parents' harsh discipline and young adults' violent attitudes and behaviors (VA/B). Structural Equation Modelling indicated that both the mothers' and fathers' punitive discipline at age 10 have an indirect impact, through the mediators, on young adults' VA/B. A direct effect was also found from mothers' and fathers' punitive discipline to violence approval and from fathers' punitive discipline to antisocial personality symptoms, and corporal punishment law attitude. The findings suggest that early experiences of harsh discipline may increase the risk of adult's violence and call for multilevel prevention and intervention programs targeting both parents and children.

Keywords: harsh parenting; corporal punishment; psychological aggression; criminal history; violence approval; intergenerational transmission theory

The recognition of children's rights through the adoption of the Convention on the Rights of the Child (CRC) in 1989 and the growing weight of research on the subject have contributed to a global shift in knowledge and thinking about the use of harsh parental disciplinary practices (Durrant & Ensom, 2017; Lansford et al., 2017). The acceptability of corporal punishment (CP), one method of harsh discipline, has been challenged increasingly worldwide (Trocmé & Durrant, 2003) leading gradually to the decline of its prevalence rates during the last two decades (Zolotor & Puzia, 2010) and the full prohibition of its use in 59 states (Global Initiative to End All Corporal Punishment, 2020). Despite the progress achieved, parents in many countries continue to endorse these practices to elicit child's behavioral compliance (M. Wang & Liu, 2014).

DEFINITIONS OF HARSH DISCIPLINE AND DIFFERENCE FROM CHILD ABUSE

CP and psychological aggression (PA) are the most common forms of harsh parental discipline (Straus et al., 1998; M. Wang & Liu, 2014). CP has been defined as the use of reasonable physical force to intentionally inflict pain, but not injury, to correct, control, and/or punish undesired child behavior (Straus & Stewart, 1999). PA refers to verbal and symbolic acts used by parents that are intended to cause psychological pain or fear on the part of the child (Straus et al., 1998). CP differs from parental child abuse (PCA) as the latter occurs when a child is injured or endangered from an act of physical force motivated by anger intended to inflict physical pain (American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health, 1998).

Despite the belief that only PCA is associated with detrimental outcomes (Fréchette & Romano, 2017), more recent empirical evidence suggests that CP and PCA are presumably different classes of behavior that often co-occur during upbringing making difficult to differentiate their selective impact (King et al., 2018). Other researchers have also underscored their similar negative outcomes (e.g., Durrant & Ensom, 2017). In their recent meta-analysis of studies focusing exclusively on spanking, Gershoff and Grogan-Kaylor (2016) reported that “spanking” and physical abuse had similar effect sizes in relation to negative child outcomes and these effects were identical in direction.

HARSH PARENTING PRACTICES AND LATER-LIFE NEGATIVE OUTCOMES

Harsh parenting in childhood has been linked to aggressive proneness in childhood, adolescence, and early adult life (Gámez-Guadix et al., 2010); juvenile delinquency (e.g. Henry et al., 2001); antisocial behavior (Johnson et al., 2016; Straus et al., 2014); intimate partner violence (Poulsen, 2018; Taillieu & Brownridge, 2015); and criminality in early adulthood (Taillieu & Brownridge, 2015). As far as the physical punishment is concerned, evidence suggests that those who have experienced it in childhood compared to those who have not are more likely to embrace violent attitudes or engage in violent behaviors as young adults (Straus et al., 2014).

Although prior findings argue that CP, in particular, might be beneficial or at least not detrimental to children under some conditions (Gámez-Guadix et al., 2010), the majority of the studies have concluded that CP and spanking invariably have detrimental child effects, regardless of whether parental warmth is high or low (Lee et al., 2013). CP has been associated with 10 maladjustment indicators related to child/adolescent and adult aggression (Gershoff, 2002). Recently Gershoff and Grogan-Kaylor (2016) showed that even when confounding variables, such as physical or psychological abuse, were removed from the models, “spanking” was still associated with negative child outcomes. King et al. (2018) also found that the reported aggression was higher among respondents who experienced recurrent CP during upbringing and Proulx et al. (2018) have shown that CP was positively related to criminal propensity and actual crime, even when controlling for positive parenting.

Both CP and PA have been associated with a number of internalizing and externalizing problem behaviors among children and adolescents (Gershoff, 2002). It is noteworthy that these associations were robust across measures, raters, time periods, and countries, and in

both cross-sectional and longitudinal designs (Gershoff & Grogan-Kaylor, 2016). PA has also been related to adult internalizing and externalizing problem behaviors in adulthood, such as borderline personality disorder (Allen, 2008) and higher hostility (Miller-Perrin et al., 2009).

PARENT'S GENDER AND CULTURAL NORMATIVENESS

Several factors appear to regulate the impact of physical discipline on child's aggressive behavior and violent attitudes, one of them being the parent's and child's gender (Tung et al., 2012). Although boys are more often the targets of CP than are girls, the results regarding the potential impact of being "spanked" on children of different genders and by parents of different genders are mixed (Dominiak-Kochanek & Frączek, 2014; Gershoff, 2002; Straus et al., 2014). The maternal harsh discipline has been associated more with aggressive proneness in children than the paternal one (Chang et al., 2003). Kalaitzaki (2019) has shown that the mother's punitive discipline affected mutual dating violence in adult life through the mediation of violence approval (VA) and negative relating to others. Proulx et al. (2018) found that CP perpetrated by both parents or by the mother only were significantly associated with criminal propensity and criminal activity in early adulthood.

Examining harsh parenting and proneness to violence within specific cultural contexts is also important as there are considerable variations in what is called the "cultural normativeness" of the violent behavior (Gershoff et al., 2010). Parental practices which are detrimental in some cultural contexts can be benign, or beneficial in others (Davidov & Khoury-Kassabri, 2013). In cultures where physical discipline is considered as normative there is a relatively weak association with children's anxiety and aggressive behavior, whereas, in cultures where CP is rarely used, there is a stronger link with children's poor adjustment (Dominiak-Kochanek et al., 2015; F. Wang et al., 2018). Lansford and Dodge (2008) found that the greater the normativeness of CP within a cultural group, the greater the endorsement of violence and the level of violence within that group. Similarly, F. Wang et al. (2018) stressed that the association between parental PA and adolescents' externalizing problem behaviors was buffered by their perceived normativeness of CP.

In Greece, just one generation ago, physical punishment was generally considered as a socially acceptable method of eliciting child's behavioral compliance, conceptually distinct from physical abuse. An old well-known proverb says: "Beating came out from paradise," signifying that it was beneficial for children, a way to help them build character as well as an indicator of parental concern and love. It was only after 2006 (Law 3500/2006 on the Combating of Intra-Family Violence) that CP was fully banned as a disciplinary measure in all settings. However, it has not yet been entirely relinquished from parents' repertoire, as almost 70% of parents use this method to correct their children's misbehavior (Proulx et al., 2018; Tsirigotiet al., 2010).

THEORETICAL UNDERPINNINGS EXPLAINING PRONENESS TO VIOLENCE

Many theories have attempted to explain the link between a history of violence exposure and violence enacted by the offspring. The intergenerational transmission theory of

violence (Straus et al., 1980) posits that violence is a socially learned behavior (Bandura, 1973). According to this theory children who witness violence within the family (e.g., receiving harsh discipline or proviolence advice by parents) or in the community (e.g., being victims of violent acts by others) are more likely to resort to violence as adults. Focused on the effects of harsh disciplinary methods in later life, Straus's criminogenic theory of CP (Straus, 2001) suggests that in contexts in which CP is frequent other forms of violence could be more readily accepted during adulthood. Additionally, the developmental model of antisocial behavior (Patterson et al., 1990). The theory suggests that delinquent behaviors are the outcome of a sequence of negative life events, starting from poor quality of parenting and proceeding to involvement in aggressive and delinquent activities in adolescence, as a result of modeling and negative reinforcement by peers.

THE CURRENT STUDY AND RESEARCH QUESTIONS

Therefore adopting the theoretical framework analyzed in the previous section linking poor parenting to negative outcomes and building on previous research showing a positive association between harsh discipline and propensity to violence in adolescence and adulthood, we examined the impact of harsh parenting on adult's violent attitudes and behaviors (VA/B), through the mediating role of violent socialization (VS) in childhood and criminal history (CH) in adolescence. Moreover, based on research evidence that the effect of parents' disciplinary practices may vary depending on their gender, we explored potential differences in outcomes across parents' gender. We studied a sample of college students for several reasons. At this age they are more likely than older ones to recall accurately what happened at the age of 10 and yet too close to the age of 15 to remember any delinquent behaviors during their adolescence. Besides, emerging adults develop new relationships (e.g., friendships, casual or serious dating) to which any VA/B, embraced as a result of their previous experiences with family and peers, might be manifested. Finally, relevant research has focused on negative outcomes in childhood or adolescence, while long-term effects of any VS and attitudes in adulthood have been underinvestigated. In sum, the research questions for this study are:

- Q1: Which are the most frequent methods of discipline used by parents? Do mothers and fathers use different methods to correct their children's misbehavior?
- Q2: Is harsh parental discipline associated with emerging adults' VA/B? Are VS in late childhood and CH in adolescence mediators in the relationship between harsh parental discipline and VA/B?
- Q3: Do the differences in the alleged association between harsh parental discipline and VA/B depend on the parent's gender?

METHOD

This study, using a cross-sectional design, was part of the International Parenting Study (IPS Fauchier & Straus, 2008), conducted by a consortium of researchers in over 20 countries worldwide. In Greece, the data collection lasted approximately 6 months.

Participants

Initially, there was a potential sample of 1,000 Greek undergraduate students taken from the two higher institutes of tertiary education located on the island of Crete. At the outset, 17 students refused to participate. Of those students who remained, 15 were excluded from the study due to incomplete data. Thus, the final sample consisted of 968 participants (27.5% male and 72.5% female) with a mean age of 20.89 (standard deviation [*SD*] = 3.54). The majority of them were Greeks (91.7%), single (53.4%), and city residents (61.5%). Students generally came from relatively socially advantaged homes; over four-fifths of the participants' biological parents were in intact marriages (83.4%), had a full-time paid job (91.8% of the fathers and 44.4% of mothers), and over 12 years of education (54% of fathers and 51.7% of mothers). Nearly half of the students came from families with annual incomes of 18,000€–44,999€ (42.2%), and the majority of the parents owned the house they lived in (86.3%). Most of the students (91.8%) reported on the biological mother and father.

Procedure

The questionnaire booklet was administered to students during regularly scheduled classes. The purpose of the study and the right to refuse to participate or to answer particular questions were explained to all students and they were assured of anonymity and confidentiality. After completion of the booklet, they were given a debriefing form that explained the study in more detail and contact information for local agencies should they needed assistance with any problem potentially acknowledged during the completion of the questionnaire (e.g., mental health or violence problem). All procedures were reviewed and approved by the Review Board of the coordinating University and by the authors' University Ethics Board. Questionnaires were sent to the study coordinator who later returned the data file to the investigators.

Measures

The questionnaire booklet comprised a cover sheet explaining the purpose of the study and the participants' rights (i.e. anonymity, confidentiality, and voluntary participation), demographic questions (see Table 1), a couple of which were edited to fit the Greek situation (i.e., annual income and education level), and the study questionnaires (see below). The questionnaire booklet was the same for all consortium members of the IPS, except the final section, in which each consortium member added questions of own interest. At the endmost part of the questionnaire, participants were asked "*how well were (they) able to remember and answer questions about what happened when you (they) 10 years old*" with potential responses "I remembered very clearly," "I remembered pretty clearly," "I remembered in a general sense," "I remembered some things but forgot others," and "I had a hard time remembering what happened when I was 10." The alpha reliabilities of the study questionnaire are reported in Table 1. The reliabilities of Straus' measures are reported here.

Independent Variables. Dimensions of Discipline Inventory (DDI)—Adult-Recall Form (Straus & Fauchier, 2007) measured 26 of the most frequently disciplinary methods used by their parents at the age of 10. They were grouped in nine scales, four of which are punitive methods. Twenty-six of the most frequently used discipline behaviors of parents were measured grouped in nine scales, four of which are punitive methods (i.e., CP, deprivation of privileges, PA, penalty tasks, and restorative behavior) and five of them are non-punitive (diversion, explain/teach, ignore misbehavior, reward, monitoring). Typical items

TABLE 1. Correlations and Cronbach's Alphas of the Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. CP	—	.230**	.223**	.404**	.106**	.192**	.162**	.174**	.096**	.106**	-.050	.045
2. DP	.317**	—	.315**	.226**	.107**	.179**	.147**	.159**	.173**	.119**	-.026	.087**
3. PTRB	.275**	.405**	—	.235**	.063*	.126**	.102**	.090**	.115**	.111**	-.032	.016
4. PA	.395**	.270**	.307**	—	.075*	.133**	.086**	.086**	.062	.059	-.038	.008
5. WVSLS	.112**	.090**	.067*	.083*	—	.390**	.467**	.446**	.352**	.287**	-.045	.289**
6. CH	.201**	.190**	.163**	.170**	.390**	—	.479**	.568**	.468**	.340**	—	.285**
7. VA	.160**	.165**	.118**	.134**	.467**	.479**	—	.493**	.485**	.332**	.091**	.441**
8. APS	.194**	.175**	.154**	.139**	.446**	.568**	.493**	—	.459**	.436**	—	.300**
9. VS	.128**	.158**	.120**	.122**	.352**	.468**	.485**	.459**	—	.332**	-.066*	.323**
10. LC	.067*	.108**	.107**	.090**	.287**	.340**	.332**	.436**	.332**	—	-.012	.247**
11. CPLA	-.100**	-.083*	-.061	-.046	-.045	-.091**	-.192**	-.116**	-.066*	-.012	—	.253**
12. CCPA	.078*	.123**	.055	.020	.289**	.285**	.441**	.300**	.323**	.247**	.253**	—
Alphas (α)	.81	.85	.87	.85	.73	.63	.71	.32	.56	.32	.30	.63

Note. 1. CP = corporal punishment; 2. DP = deprivation of privileges; 3. PTRB = penalty tasks and restorative behavior; 4. PA = psychological aggression; 5. WVSLS = world values study legal socialization; 6. CH = criminal history; 7. VA = violence approval; 8. APS = antisocial personality symptoms; 9. VS = violent socialization; 10. LC = legal cynicism; 11. CPLA = corporal punishment law attitudes; 12. CCPA = corporal and capital punishment attitudes. Coefficients above the diagonal are correlations between variables for the mothers and coefficients below the diagonal are correlations between variables for the fathers. Coefficients between the variables 5–6 and onwards are the same for mothers and fathers as it is the same person reporting for them.

* $p < .05$. ** $p < .01$. *** $p < .001$.

are: “How often did your parents shake or grab you to get your attention?”, “How often did your parents spank, slap, smack, or swat you?” Items were answered for both the mother and the father in 10-response categories ranging from N (Never) through 9 (Two or more times a day). In the present study, the four punitive discipline methods were used. Straus and Fauchier (2007) have reported adequate reliability coefficients for both the mothers and fathers’ subscales, respectively in a student’s sample (CP: .81 and .80; deprivation of privileges: .75 and .74; PA: .81 and .74; penalty tasks and restorative behavior: .61 and .68).

Violent Socialization (VS). The eight-item VS scale is part of the Personal and Relationships Profile (Straus et al., 1999/2007) and measures the extent to which the respondent experienced and witnessed violence and received proviolence advice during childhood from family and nonfamily persons. Four items were used (e.g., “My father told me to hit back if someone hit me or insulted me,” “When I was a kid, people (adults or kids) who were not part of my family pushed, shoved or slapped me, or threw things at me”). The response categories ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*). Straus et al. (1999/2007) have reported an alpha coefficient of .74 in a student’s sample.

Criminal History (CH). CH (Straus & Ramirez, 2004) assessed the extent to which the respondent has committed criminal acts *in adolescence* (since age 15). This measure is part of the Personal and Relationships Profile (Straus et al., 1999/2007). For the CH three items out of the eight were used in the present study: “Since age 15, I have physically attacked someone with the idea of seriously hurting them,” “Since age 15, I have stolen money (from anyone, including family),” and “Since age 15, I hit or threatened to hit someone who is not a member of my family.” The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*). An alpha reliability of .80 has been reported in a student’s sample (Straus et al., 1999/2007).

Dependent Variables—VA/B in Adult Life. The violent attitudes in adult life were measured with five scales. The first three scales refer to laws and social norms, whereas the latter two to interpersonal situations:

Antisocial Personality Symptoms (APS). The scale is also part of the Personal and Relationships Profile (Straus et al., 1999/2007) and assesses the extent to which the respondent has committed criminal acts in adult life. Five out of the nine items were used in the present study (e.g., “I don’t think about how what I do will affect other people,” “I often lie to get what I want”). The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*). Straus et al. (1999/2007) have reported an alpha coefficient of .73 in a student’s sample.

Violence Approval (VA). The scale is part of the Personal and Relationships Profile (Straus et al., 1999/2007) and measures the extent to which the use of physical force is acceptable in various interpersonal situations. Six out of the 10 items were used in the present study (e.g., “I can think of a situation when I would approve of a husband slapping a wife’s face,” “It is sometimes necessary to discipline a child with a good, hard spanking”). The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*). An alpha coefficient of .70 has been reported in a student’s sample (Straus et al., 1999/2007).

Corporal and Capital Punishment Attitudes (CCPA). This six-item scale comprises items related to the CP of prisoners (e.g., “Violent crimes should be punished violently”), the death penalty (e.g., “The death penalty is a necessary punishment in a fair and just society”), and the CP in schools (e.g., “Teachers should be able to use physical punishment on students when they have no other way to respond to difficult situations”). The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*).

Legal Cynicism (LC). Five items assess general beliefs about the legitimacy of law and social norms and specifically respondent's ratification of acting in ways that are not within law or the social norms (Sampson & Bartusch, 1998). Example items are "There are no right or wrong ways to make money," "Laws are meant to be broken." The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*).

Corporal Punishment Law Attitudes (CPLA). The scale included the following two items: "Spanking children should be illegal" and "Physical punishment that causes injury to children should be illegal" which were developed for the IPS. The responses ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*).

World Values Study Legal Socialization (WVLS). This is an eight-item scale which assesses people's attitudes and beliefs about the law, legal authorities, and legal institutions acquired through their interactions with legal actors. Example items are "Cheating on taxes if you have the chance," "Avoiding a fare on public transport"). The responses ranged from 1 (*Never justified*) to 4 (*Always justified*).

Translation of the Measures

The questionnaire booklet was translated into Greek by an English-speaking Greek and then back-translated by a Greek-speaking British who had not seen the questionnaire before. Agreement was reached with the study coordinator and the on-site investigators for the modifications made to the back-translated items and to meet "conceptual equivalence."

Data Analysis

Initially, descriptive statistics and bivariate analyses were performed. Significant correlations between the study variables were entered in the hypothesized model. Structural Equation Modeling (SEM), using Stata 12 software (2011), was conducted to test the hypothesized effects of parents' punitive discipline methods on adults' VA/B through the mediating role of adolescent's CH and childhood VS. The paths, as shown in Figure 1, were defined as follows: (a) from parents' punitive discipline to adults' six measures of VA/B (VA, LC, CPLA, CCPA, legal socialization, and APS); and (b) from parents' punitive discipline to adolescent's CH and childhood VS; and (c) from CH and VS to adults' six measures of VA/B. All relationships (both direct and indirect) were assumed to be positive, except the relationships of CPLA with the dependent variables, which were assumed to be negative. The full mediation process is represented with the indirect paths in boldface type, without the direct path (dot lines) from parents' punitive methods to adults' VA/B.

In all analyses, listwise deletion with missing observations was used. Because of the exogenous variables' interrelatedness (Table 1) and the potential relatedness of the unobserved aspects of the variables, all exogenous variables and all errors/disturbances of empowerment dimensions were designated as covarying. Model fit was assessed using the χ^2 /degrees of freedom ratio (CMIN/DF) below 3 (Kline, 2005), the standardized root mean square residual (SRMSR) between 0.06 to 0.08 or less, the Tucker-Lewis index (TLI), or non-normed fit index (NNFI) and the comparative fit index (CFI) between 0.90 and 0.95 or above, the coefficient of determination (CD) above 0.90, and finally, the root mean square error of approximation (RMSEA) no greater than 0.06 (Hu & Bentler, 1999). For the comparison of the models, the Akaike's information criterion (AIC) and Bayesian information criterion (BIC) indices were used; the smaller the values the better the fit.

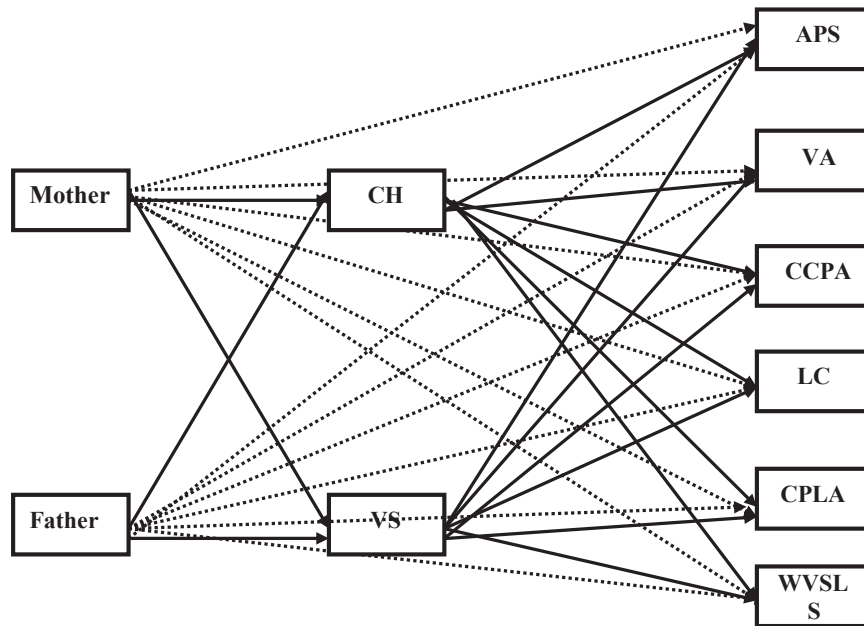


Figure 1. Hypothesized model of adults' violent behaviors/attitudes.

Note. This is a simplified version of the hypothesized model of adults' violent behaviors /attitudes (VA/B). The full model includes each parent's four types of punitive discipline methods (Corporal punishment, Psychological aggression, Deprivation of privileges, Penalty tasks and restorative behavior) as independent variables, which are fully depicted in Figure 2. The indirect paths are indicated with boldface type. CH = Criminal History; VS = Violent Socialization; APS = Antisocial Personality Symptoms; VA = Violence Approval; CCPA = Corporal and Capital Punishment Attitudes; LC = Legal Cynicism; CPLA = Corporal punishment Law Attitudes; WVSL S = World Values Study Legal Socialization.

RESULTS

Descriptive Statistics

The majority of the participants (83.1%) recalled adequately what happened at age 10 (i.e., in a general sense, pretty clearly or very clearly). Mothers and fathers used nonpunitive discipline methods in a higher percent (99.2% and 98.3%, respectively) compared to the punitive/power-assertive methods (94.7% and 89.7%, respectively). The most frequent nonpunitive and punitive methods by both parents was "explain/teach" and "PA," respectively. Detailed information on the discipline methods is presented in Table 2.

Structural Equation Modeling

Data analysis consisted of the following steps. In the first step, the pathways from both parents' punitive discipline to VA/B were examined. This model did not provide a good fit for the data ($\chi^2 = 2.553$, SRMR = 0.130, TLI = 0.327, CFI = 0.613, RMSEA = 0.169, CD = 0.879). However, there were significant indirect relationships between parents' punitive discipline and adults' VA/B. These results suggested that there was a potential worth of examining punitive discipline separately for mothers and fathers and this was attempted at the second step of the analysis.

TABLE 2. Frequency (Means and *SD*) and Prevalence (%) of the Discipline Methods Used by the Mothers and Fathers

	Frequency (M/ <i>SD</i>)		Prevalence (%)	
	Mother	Father	Mother	Father
Punitive/power-assertive discipline	20.9 (48.8)	17.2 (44.9)	94.7	89.7
Corporal punishment	11.6 (45.9)	8.7 (39.3)	52.8	47.2
Deprivation of privileges	10.4 (39.0)	9.2 (36.4)	64.2	57.4
Penalty tasks and restorative behavior	27.6 (66.5)	22.1 (60.7)	82.8	72.0
Psychological aggression	39.4 (89.4)	33.5 (86.5)	87.6	80.4
Nonpunitive discipline	56.9 (68.9)	42.2 (54.5)	99.2	98.3
Diversion	23.7 (66.0)	17.5 (51.7)	74.9	68.9
Explain/teach	117.6 (156.8)	83.8 (130.7)	97.5	94.0
Ignore misbehavior	16.4 (53.2)	17.4 (60.2)	60.2	58.7
Monitoring	46.1 (106.8)	27.3 (71.9)	74.8	65.5
Reward	64.7 (93.6)	50.5 (82.3)	92.5	89.8

Using an explorative approach, three alternative models were compared for the mother and three for the father with the Robust Maximum Likelihood (RML) estimation method (Jöreskog & Sörbom, 2006). For each parent, punitive methods were assumed to have both a direct relationship with adults' VA/B and an indirect relationship through the mediation of CH and VS. This was defined as a partially mediated model (Model II). In model III, punitive methods were assumed to have only an indirect relationship with adults' VA/B through the full mediation of CH and VS. These two mediated models (II and III) were tested against a nonmediated model (I) for each parent, where punitive discipline was assumed to have a direct relationship with adults' VA/B.

In the models of both parents, the paths from CH and VS to CPLA were nonsignificant. For the sake of parsimony, in the next step of the analysis of the conceptual model, nonsignificant paths were left out, but the fit of indices turned out to be a bit worse; so CPLA was included again. For each parent, the nonmediation model (Model I) and the two mediation models (Models II and III) were tested and compared to each other. The nonmediation models (Model I) produced the worst fit. Both mediated models adequately fitted the data, with partial mediation models (II) being slightly better than the complete mediation models (Table 3).

A summary of the standardized path coefficients (betas) can be seen in Table 4. Figure 2 shows the path diagrams for the mothers' and fathers' punitive discipline methods with the estimated standardized beta coefficients of Model II. Consistent with a partial mediation process, the paths from both the mothers' and fathers' punitive discipline both to CH and VS, and the paths from both CH and VS to all variables of adults' VA/B (except the path from CH and VS to CPLA for the mother and the path from CH to CPLA for the father) were

TABLE 3. Summary Goodness-of-Fit Statistics of the Models of the Adults' VA/B

	CMIN/DF	SRMR	TLI	CFI	RMSEA	CD	AIC	BIC
Mother								
Model I	16.085	0.044	0.890	0.949	0.064	0.626	10908.361	11122.780
Model II	34.450	0.028	0.953	0.981	0.043	0.631	13091.260	13398.204
Model III	30.214	0.031	0.958	0.979	0.041	0.628	13089.838	13367.550
Father								
Model I	32.664	0.021	0.955	0.980	0.044	0.676	11244.884	11463.235
Model II	47.58	0.018	0.970	0.988	0.035	0.680	13417.004	13727.480
Model III	36.731	0.026	0.967	0.984	0.037	0.676	13421.780	13703.149

Note. Model I = No mediation; Model II = Partial mediation; Model III = Full mediation; AIC = Akaike's information criterion; BIC = Bayesian information criterion; CD = coefficient of determination; CFI = comparative fit index; CMIN/DF = The χ^2 /degrees of freedom ratio; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; TLI = Tucker-Lewis index.

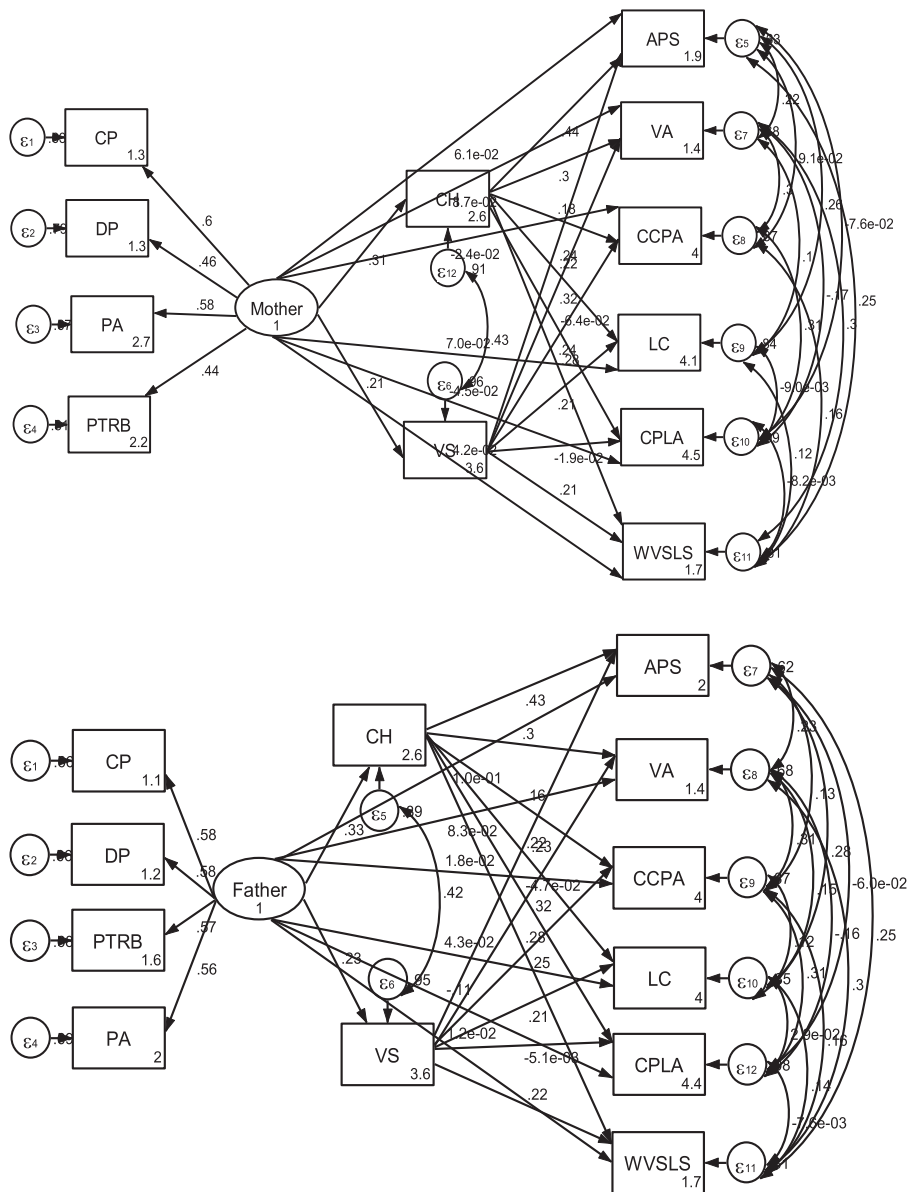


Figure 2. Structural equation model representing effects of (a) mothers' and (b) fathers' punitive discipline methods on adults' VS/A through the mediation of CH and VS. The lines represent paths between the variables. The values along the lines are the estimated standardized beta coefficients representing the strength of influences. Significant coefficients at 0.05 or above are bold typed. Curved lines represent correlations among errors.

strong and yielded significant values. As anticipated, the paths to CPLA were negative. The direct paths from the mothers' and fathers' punitive discipline methods to the variables of adults' VA/B were nonsignificant, except the one to the VA measure for the mother and to the APS, VA, and CPLA for the father.

TABLE 4. Standardized Path Coefficients (Beta) for Both the Mothers' and Fathers' Model of PD

Predictors in the Equation	Dependent Variables in the Equation							
	CH	VS	APS	VA	CCPA	LC	CPLA	WVSLs
Mother's PD	.31***	.21***	.06	.09*	-.02	.07	-.05	.04
CH			.44***	.30***	.18***	.22***	-.06	.28***
VS			.24***	.32***	.24***	.21***	-.02	.21***
Father's PD	.33***	.23***	.10**	.08*	.02	.04	-.11**	.01
CH			.43***	.30***	.16***	.22***	-.05	.28***
VS			.23***	.32***	.24***	.21***	-.01	.22***

Note. APS = antisocial personality symptoms; CH = criminal history; CCPA = corporal and capital punishment attitudes; CPLA = corporal punishment law attitudes; LC = legal cynicism; PD = punitive discipline; VA = violence approval; VS = violent socialization; WVSLS = world values study legal socialization.

*** $p < .001$. ** $p < .01$. * $p < .05$.

DISCUSSION

This was a retrospective study designed to examine the long-term effects of parental harsh discipline covering three developmental stages: late childhood, adolescence, and emerging adulthood. Assuming that an adult's endorsement of VA/B at present may have evolved in early development and that this may depend partially on VS in childhood (WHO, 2009) and CH in adolescence (Proulx et al., 2018), these variables were considered as potential mediators between harsh discipline and approval of VA/B in later life. Possible direct and indirect effects of punitive disciplinary methods on violence endorsement were examined for each parent separately. To the best of our knowledge, this is the first large-scale study on this subject in Greece.

Prevalence of Punitive and Nonpunitive Methods

Although nonpunitive discipline methods were used by both parents in a high percent, with "explain/teach" being the most frequent one, punitive practices were also used extensively, with "PA" being the most frequent one. In line with other findings parents use PA frequently (e.g., Dominiak-Kochanek, et al., 2015) as they may erroneously consider it as a milder discipline method compared to harsher ones like CP (Solomon & Serres, 1999). Interestingly in this study CP was a widely used practice as approximately half of the fathers and the mothers made use of it. Comparable to our study prevalence rates have been reported among elementary school-age children worldwide, such as 27%–38% in the United States (M. T. Wang & Kenny, 2014), 42.9% in Canada (Clément & Chamberland, 2007), 57.1% in Hong Kong (Tang, 2006); 58.30% and 47.26% for the mothers and fathers, respectively, in China (F. Wang et al., 2018). It is noteworthy that the rates for every punitive and non-punitive method were found to be higher for the mothers than for the fathers, probably because mothers, being more involved in the children's rearing, are the ones who use more frequently multiple disciplinary methods to correct misbehavior.

Direct and Indirect Pathways to VA/B: The Role of Parent's Gender

Consistent with prior research related to the intergenerational transmission theory which posits that violence begets violence (Straus et al., 1980), direct and indirect pathways from harsh parenting to proneness to violence in early adulthood were identified. It was demonstrated that VS in late childhood, indicating the influence of both the family environment and the social context within which harsh discipline occurs, and CH in adolescence mediate the association between punitive disciplinary methods and VA/B in early adulthood. The pattern of relationships revealed for the indirect pathways was common for both parents except for the CPLA measure, which was significant only for the fathers. Recent research found similar results in samples of young adults. Rebellon and Straus (2017) demonstrated that antisocial behavior was higher among young adults who reported experiencing CP in childhood. Also, Affifi et al. (2019) estimated that in the United States harsh physical punishment and/or child maltreatment account for 45.5% and 47.3% of antisocial behaviors among men and women, respectively.

Although other studies have shown a direct association between adult antisocial behavior and exposure to CP by both parents in Asia, Europe, and North America, and by mother-only in North America (Rebellon & Straus, 2017), it is noteworthy that in our data it was the father's direct impact more severe than that of the mothers' in predicting negative outcomes. In line with social learning theory and prior research evidence (Gershoff et al.,

2010; Grogan-Kaylor, 2005; Straus et al., 1997), paternal harsh discipline—and not maternal—resulted in detrimental outcomes, such as endorsement of not only violent attitudes but behaviors too (i.e., APS in adulthood). As it has been shown that violence in one domain tends to generalize or spill over into other domains (Baron & Straus, 1987), the early prevention of any VA/B is of paramount importance. Investigating emerging adult attitudes toward CP is important as it may help determine how they are likely to discipline their own children in the future (Walker et al., 2019).

The Contribution of the Cultural Context: Parental Roles and Socioeconomic Factors

Although our data do not allow us to explore in depth why harsh discipline at the hands of the father and not the mother is directly associated with adult antisocial behavior and CP acceptability, we can offer several speculations. These findings could be partly understood in light of the Greek cultural values related to parental roles and gender inequalities. In the traditional nuclear family of the past, fathers were considered the head of the household having great authority over mothers and children, albeit with limited involvement in childrearing. Despite the modernization of the last decades, traditional role delineations between genders are still present. Whereas mothers are the child's primary caregivers, covering a wide range of child's needs, managing their daily routines, and implementing disciplinary methods on a daily basis, fathers rarely assume this role. Due to parents' differential roles in childrearing, their disciplinary methods may have a distinctive impact on the child. Father's harsh discipline, being implemented often in a detached way (strict but fair) (Antonopoulou et al., 2012), may be perceived as more indisputable and decisive than the mother's. Therefore, father's disciplinary methods may exert a stronger negative impact on child's VA/B later in life, whereas the maternal warmth context in which discipline is implemented may act as a protective factor that attenuates the negative impact of harsh discipline. Rather than investing on warm interpersonal relationships like mothers do, fathers tend to be more practical, instrumental, and detached and the administration of CP is usually harsher than the mother's (McKee et al., 2007). Ma et al. (2012) have found that even the occasional use of CP by the father was associated with greater externalizing behavior for youths, while both paternal and maternal warmth was associated with lower levels of externalizing behaviors. The study by Lansford et al. (2014) in eight countries has shown that in Italy, which resembles the Greek cultural context, maternal warmth protected against detrimental effects of CP.

Although not directly measured in our study, the adoption of VA/B by adolescents and young adults may well be—at least partially—a consequence of social and economic factors. During the last decade, Greece suffered a severe and enduring economic recession. Lazaratou et al. (2017) have found that adolescents scored higher in aggressive behaviors as a result of the stress caused by potential unemployment and financial insecurity in their families. Another survey has shown that between 2002 and 2010, although a decline in adolescent physical fighting was observed in 19 out of 30 countries, an upward trend was recorded in Greece (Pickett et al., 2013).

Limitations of the Study

There are several limitations to be considered. This is a cross-sectional study and causal attributions cannot be inferred. The sample was homogeneous consisting of university students in the island of Crete, coming from relatively socially advantaged backgrounds (i.e., living in urban areas, coming from middle-class households with both parents being relatively well educated), and although not anticipated to differ significantly, the results cannot

be generalized to less socially advantaged students, coming from other areas (e.g., mainland Greece) and certainly not to the general population of Greece. Men were underrepresented in this sample, and thus potential gender differences could not be examined. Our findings may have been affected by either response or recall bias. However, research have shown that people recalling adverse life events rather underestimate than overestimate their significance (Brown et al., 2007). Moreover, the high rates of harsh discipline reported in this study, which respondents adequately recalled (83.1%), indicates that the retrospective reports must have been accurate. In future studies, the use of multiple informants could minimize potential self-report bias. Finally, future studies should examine various other mediating factors that may be involved in the pathway from harsh parenting to VA/B in adult life.

Conclusions and Implications

Despite the limitations, the findings of this study suggest that children's exposure to punitive discipline methods at the age of 10 has long-term impacts, affecting proneness to VA/B in adult life through a mediating process. The findings highlight the importance of social contexts, such as school and peers, apart from the familial one, in the endorsement of VA/B. Since the endorsement of violence appears to develop at an early age, prevention efforts should promote a life-long nonviolent education for all (parents and children) so as to establish and/or strengthen nonviolent beliefs. The parents should be helped to explore and modify potential maladaptive beliefs about inappropriate discipline methods, increase awareness of the detrimental short-term and long-term effects of these methods on their children's development (Romano et al., 2013), and be supported in the learning and mastery of alternative discipline methods and appropriate parenting skills in order attitudinal and behavioral changes to be consolidated. Interventions should support children in acquiring appropriate communication and conflict resolution skills and building healthy peer social networks. For those children already exposed to violence, interventions should safeguard them from the deleterious effects of harsh parenting and VS. "At risk" and "high-risk" youths should be identified, and interventions should address these adolescents in multiple levels and settings (e.g., academic enhancement and relationship building in community centers, churches, schools, and juvenile detention facilities). Lastly, the impact of the economic crisis should be considered as the multiple stressors faced by parents, children, and adolescents in their everyday life may exacerbate the use of violence.

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