Published in final edited form as:

J Child Adolesc Trauma. 2016 June ; 9(2): 127–135. doi:10.1007/s40653-016-0092-1.

Effects of Exposure to Domestic Physical Violence on Children's Behavior: A Chinese Community-based Sample

Yuping Cao,

Mental Health Institute, Second Xiangya Hospital, Central South University

Longfei Li,

Mental Health Institute, Second Xiangya Hospital, Central South University and Jining Mental Hospital of Shandong Province

Xingfu Zhao,

Mental Health Institute, Second Xiangya Hospital, Central South University and Wuxi Mental Health Center

Yu Zhang,

Mental Health Institute, Second Xiangya Hospital, Central South University

Xiaoyun Guo,

Shanghai Mental Health Center

Yalin Zhang, and

Mental Health Institute, Second Xiangya Hospital, Central South University

Xingguang Luo

Beijing Huilongguan Hospital

Abstract

Domestic physical violence (DPV) is common in China due to its long history of slavery and feudalism. This study aimed to examine the effects of exposure to DPV on children's behavior in a Chinese community. Ninety-three 12- to 16-year-old adolescents exposed to DPV were compared to 54 adolescents with no exposure to DPV. We found that DPV exposure was associated with adverse behaviors in children, especially among boys. Children witnessing DPV alone had similar behavioral scores as the abused children. We recommend that both abused and DPV witness-only adolescents in Chinese communities need treatment to mitigate the effects on maladjusted behaviors. The intervention programs for children who witness domestic violence are also important.

Correspondence concerning this article should be addressed to Yalin Zhang, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, Hunan, China, 410011. zhangyl69@vip.sina.com.

Yu ping Cao, MD, PhD, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, China; Longfei Li, MD, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, China, and Jining Mental Hospital of Shandong Province, Jining, China; Xingfu Zhao, MD, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, China, and Wuxi Mental Health Center, Wuxi, China; Yu Zhang, MD, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, China; Xiaoyun Guo, MD, PhD, Shanghai Mental Health Center, Shanghai, China; Yalin Zhang, MD, Mental Health Institute, Second Xiangya Hospital, Central South University, Changsha, China; and Xingguang Luo, MD, Beijing Huilongguan Hospital, Beijing, China.

Keywords

Domestic violence; child; behavior; witness; community-based

Domestic violence (DV) has been defined as physical, mental, or sexual abuse occurring between family members, including hitting, slapping, kicking, verbally insulting, threatening or intimidating, social isolation, deprivation, neglect, and sexual assault, regardless of whether the abuse occurs inside or outside the home (Cao et al. 2006). DV is not only a social problem but a medical, public health, and mental health problem (Marwick 1998). Effects of DV not only include direct physical injury, disability, or death to victims but also lead to significant psychological problems and mental illnesses. Due to their relative vulnerability and dependency, violence against children is particularly notable. According to a large-scale epidemiological investigation on DV conducted in Hunan China in 2003, the lifetime prevalence of spousal abuse is 10.2% and child abuse is 7.8% (Cao et al. 2006). It can be conservatively estimated that 40 million households have been or are impacted by DV in China with approximately 44 million children involved.

The psychological and behavioral development of a child is affected by growing up in an environment with D V. Children's exposure to DV has been linked to a range of psychiatric symptoms and indicators of poor adjustment and was closely associated with both externalizing behavior and internalizing symptoms (Schwab-Stone et al., 1999). Caspi et al. (2004) found that frequent exposure to rage and conflict between family members (e.g., parents) negatively impacts children. Intimate partner violence may raise the incidence of various behavior problems among male and female children; as a result, male children typically externalized the aggressive behaviors, and females typically internalized the aggression (anxiety and depression) they had been exposed to (Graham-Bermann et al., 2010). Researchers have reported that witnessing or experiencing violence in childhood may result in intergenerational transmission of violence or aggression (Liu et al., 2012; Jankowski et al., 1999; Dixon et al., 2005). In extreme cases, in order to avoid "disaster," children might run away from home and further limit their right and opportunity to be fostered, cared for, protected, and educated even in a violent environment (Ding, 2000), inevitably causing more serious behavior problems.

A personal history of abuse may extensively and seriously damage a child's psychological health. Research has shown that abused children suffer from various behavioral and emotional problems (Knutson et al., 1995; Cicchetti et al., 1995), and aggression is more prevalent in children who suffer from physical abuse (Lewis, 1992). Kaplan et al. (1998) also found that physical abuse is an important risk factor for mental illness among teenagers. The incidence of major depression, conduct disorder, and substance abuse of teenagers is 7 times, 9 times, and 19 times higher, respectively, among teenagers with a history of physical abuse than controls. Children who suffer from physical abuse or neglect have more conduct problems, attention problems, hyperactive behaviors, destructive behaviors, and antisocial behaviors than those not exposed to these types of abuse (Knutson et al., 1995). Aggression, social withdrawal, and increased difficulty with relationships with peers have all been associated with a childhood history of abuse (especially physical abuse and neglect;

Cicchetti et al., 1995). Experiencing abuse has been shown to result in impairment of academic performance, running away from home, anxiety, depression, and suicide in the short term and cross-gender behavior, gender conflict, and other sexual behavioral problems in the long term (Wright et al., 2009; Rosen et al., 1998). A longitudinal study of sexually abused children that included 43 years of follow-up showed that older age and severity of abuse were associated with greater risk for psychopathology (Cutajar, 2010).

Numerous studies indicate exposure to DV may increase the risk of developing behavioral problems among children. Despite significant trends, there remains great variation in behavioral outcomes among children exposed to domestic violence (Zielinski et al., 2006). Effects of child abuse may be influenced by the environment in which children develop, including their families, peer groups, schools, and communities. Examples of specific factors may include parental education and occupation, divorce of parents, alcohol or drug abuse, maladjustment, poor family economic conditions, as well as poor regional, economic, and cultural levels (Wolfe et al., 2003; Wong et al., 2009). Socioeconomic factors may moderate and enhance the psychological and behavioral impact of child abuse.

Given the complicated nature of child abuse research, much of the research to date has relied on retrospective studies that have targeted special populations including prisoners, prostitutes, drug abusers, specific clinic populations, or school samples (Schimmenti et al., 2014; Chen et al., 2015). The diversity of these samples makes it difficult to assess the real effect of exposure to domestic violence on children's behaviors. In this study, we used a community-based sample and matched controls. We selected the sample from the Chinese population because of the magnitude of this population (occupying one-sixth of the world population), and because DV is highly common in Chinese society due to China's long history of slavery and feudalism. We hypothesized that exposure to DV negatively impacts children's behaviors, and that this effect may be increased in children who suffered from physical abuse compared to those who only witnessed DV.

Method

Sample and Recruitment

Families from Xinxiang, Henan province in central China were invited and screened for participation in this study based on information obtained from teachers, neighbors, friends, the Women's Federation, the police, and neighborhood committees. The Women's Federation is a federal agency whose mission is to represent and safeguard women's rights and interests. Two criteria were used to screen families for participation: 1) a history of domestic physical violence (DPV), and 2) having an adolescent child between the ages of 12 and 16. For the purpose of recruitment, DPV was defined as any physical violence toward children and/or other family members occurring at least 10 times in the previous year. Any adult family member was screened using the Physical Abuse Questionnaire Screening (Moffitt et al. 1997) to confirm exposure to domestic violence. Families with children between 12 and 16 were targeted. Of those invited to participate, 156 families were confirmed positive for DPV exposure, and of those families, 93 families had a child between the ages of 12 and 16 and served as the case group in this study. Of the initially screened families that were negative for DPV, 54 families were matched to the case group in regards

to age, gender, family status, parental age, and education level and served as the control group.

Measures

Participation included assessment with the Childhood Trauma Questionnaire (CTQ-SF) and Screen Scale of Child Abuse (SSCA) for the adolescents, the Child Behavior Checklist (CBCL) for their parents, and the Physical Abuse Questionnaire (PAQ) for all adult family members. Summary descriptions of each measure are provided below.

Childhood Trauma Questionnaire-28 item Short Form (CTQ-SF)—The CTQ-SF (Bemstein and Fink, 1998) was translated into Chinese and edited by Zhao and colleagues in 2005 (Zhao et al., 2005). It consists of 28 items that provide assessment in 5 subscales: emotional abuse (EA), physical abuse (PA), sexual abuse (SA), emotional neglect (EN), and physical neglect (PN). Each item uses a 5-degree graded score: 1=*never*, 2=*occasionally*, 3=*sometimes*, 4=*usually*, 5=*always*.

Achenbach Child Behavior Checklist (CBCL)—The CBCL (Achenbach and Edelbrock, 1981) is one of the most frequently used quantitative measures of child maladaptive behavior. This instrument allows parents and others to identify and describe children's internalizing and externalizing maladaptive behaviors. This study used the Chinese version (for parents; Yue et al., 1999). It consists of 113 items, each using a 3-degree graded score: 0 (*not true*), 1 (*somewhat or sometimes true*), and 2 (*very true or often true*) and measures 8 subscales: withdrawal from society, somatic problems, anxiety/depression, social interaction problems, thought problems, attention problems, delinquency, and aggression. As suggested in the original measure, withdrawal from society, somatic problems, and anxiety/depression were further classified as internalizing behaviors, and delinquency and aggression were classified as externalizing behaviors in our study.

Physical Abuse Questionnaire (PAQ)—The PAQ (Moffitt et al., 1997) consists of 13 questions regarding types of physical abuse and the frequency of the abuse. It was administered to all adult family members in our study to confirm a history of violence in the families in the case samples.

Screen Scale of Child Abuse (SSCA)—The SSCA (Yang et al., 2004) consists of 8 items and is used to identify different types of abuse, DV exposure time, and the perpetrators. The items include verbal insult, economy control, isolation, neglect, punch and kick, bite and slap, beat with stick and knife, and sexual attack (including enforced prostitution). The test-retest reliability within two weeks was satisfactory (kappa coefficients = .926; Yang et al.).

Demographic data—General information collected about the adolescents in the study included age, gender, childhood growth, current grade level, and prenatal maternal health care. Information about the parents and family included household composition (e.g., two-parent home, single-parent home, divorced parents, etc.), economic status, parental age, and education level.

Procedure

The investigation was conducted by two postgraduates who systematically studied and mastered the interview protocol and how to use and explain the terms in the measurements. The sampled adolescent children and their parents participated in face-to-face interviews. The CTQ-SF and SSICA were administered to the children, the demographics data and CBCL were conducted with their parents, and the PAQ was administered to all adult family members. The significance of research was explained to the respondents. Respondents were informed that the survey was entirely voluntary and confidential; after they had an opportunity to ask questions, individuals who agreed to participate provided verbal (for illiterate respondents) or written informed consent. To protect respondents' privacy, interviews usually took place in a location of the respondent's choosing, such as in a private room, a classroom, or in the fields, and data was collected anonymously. For illiterate respondents, the researcher read out the questions one by one and explained the terms with a neutral attitude. This study was approved by the Medical Ethic Committee in Second Xiangya Hospital of Central South University, China.

Data Analyses

Analysis was conducted using SPSS 16.0. T-test was used to test for significant associations between numerical variables, and Pearson chi-square and Fisher's exact tests were used for categorical variables. Pearson correlation analysis was used to assess the relationship between child abuse and children's behavioral problems. Multiple testing was corrected by Bonferroni correction.

Results

Participant Characteristics

In the case group, there were 71 boys (76.3%) and 22 girls (23.7%), with mean age of 14.7 ± 1.2 years; father's age was 40.2 ± 5.5 years, and mother's age was 40.2 ± 6.0 years. In the control group, there were 43 boys (79.6%) and 11 girls (20.4%), with mean age 14.3 ± 1.3 years; father's age was 38.9 ± 5.3 years, and mother's age was 38.9 ± 6.4 years. There were no significant differences in age, gender, school mark, the situation of maternal health care and childhood growth, as well as children's household composition and the economic status between the two groups (see Table 1 for descriptive statistics). There were also no significant differences between the parents in age or education ($p > .05$).

The case group was further analyzed by dividing it into two groups: those children who suffered from physical abuse and those who only witnessed DPV. There were 52 physically abused children and 41 witnessed only children in the case group.

Children's Behavior Problems

The CBCL total score and scores of anxiety/depression, social interaction problems, attention problems, delinquency, aggression, and externalizing behaviors all were significantly higher in the research group than those in the controls (all $p < .05$; see Table 2). With regards to gender, the CBCL total score and scores of anxiety/depression, social interaction problems, attention problems, delinquency, aggression, and externalizing

behaviors in boys were significantly higher in the research group than those in the controls (all $p < .05$), while no differences were found between girls in the research and control groups ($p > .05$; see Table 3). When comparing children who experienced domestic physical violence and those who only witnessed it, scores of delinquency in abused children were significantly higher than in DPV witness children with no history of abuse ($p = .046$), while differences of all other scores of CBCL were not significant (all $p > .05$; see Table 4).

The total CTQ-SF score positively correlated with the total CBCL score and all subscale scores except for somatic problems (all $p < .05$). Emotional abuse positively correlated with anxiety/depression, social interaction problems, attention problems, delinquency, aggression, and externalizing behaviors (all $p < .05$). Physical abuse correlated with social interaction problems, attention problems, delinquency, aggression, and externalizing behaviors (all $p < .05$). Sexual abuse correlated with social interaction problems and attention problems ($p < .05$). Emotional neglect correlated with anxiety/depression, social interaction problems, attention problems, aggression, externalizing behaviors, and internalizing behaviors ($p < .05$). Physical neglect positively correlated with anxiety/depression, social interaction problems, delinquency, aggression, and externalizing behaviors (all $p < .05$; see Table 5).

Discussion

In the past 4,000 years, China was a slavery and then feudalistic society. Many remnants of the traditional feudal autocratic beliefs and values remain in the modern Chinese society, especially within the confines of the family unit. The Chinese population is one of the biggest one in the world, and as such it is very important to investigate the effects of domestic violence within this population. Domestic violence in China is traditionally regarded as a family affair, thus it is beyond social and governmental concern and beyond the consideration of Chinese modern law. This leads to a high prevalence of domestic violence in the Chinese community, so this study on domestic violence is of import to add to the current literature.

Childhood behavioral problems are likely to be related to both inherent biological factors and postnatal environmental factors (Sheeber et al., 1998; Gjone, 1997; Hill, 2002). Among various environmental factors, family environment plays the most direct, profound, and long-lasting role in a person's psychological development. Considerable evidence demonstrates that family structure, economic conditions of families, family atmosphere, parent-child relationships, parents' educational background, parents' occupation, and child-rearing style can remarkably influence the development of a child's psychology and behaviors (Zielinski et al., 2004; Wolfe et al., 2003; Wong et al., 2009; English et al., 2003). A stable environment provides a sense of safety that is needed to build behaviorally healthy and psychologically mature children; a lack of this stability (e.g., absence of a warm parental figure, lack of environmental control, and active parental conflict with a negative attitude toward the child) was associated with adolescent suicide attempts (Benjaminsen et al., 1990). Family environment and emotional atmosphere also play an important role in children's psychological development and personality formation. Harmony and high familiarity in family can provide children with a sense of safety, which is propitious to the normal development of their psychological behavior (Fox et al., 2005). By contrast, the

incidence of children's behavior problems rise with frequent quarrel between parents, poor marital state, poor mother-child relations, and conflicts between other family members (Gilbert et al., 2013; Seng et al., 2002; Hilton et al., 2002).

Similar to Caspi and colleagues' results (2004), the current study found that, in comparison with the controls, children exposed to DV had more behavior problems, such as anxiety/depression, social interaction problems, attention problems, delinquency, and aggression, even after controlling for children's and their parents' general data, family structure, economic conditions, and community environment. DV in a family leads to poor functioning, poor communication, and lack of harmony (Yen et al., 2008; Paradise et al., 1994). Due to the apparent differences between the reality and their aspiration for parents' harmony and family warmth, children living in such environments lack a sense of safety and tend to suffer from more anxiety, depression, and other negative emotions. When attempts to change such situations fail, children might be reprimanded or abused by their parents, leaving them feeling frustrated, useless, and inferior.

Hahm et al. (2010) illustrated that all types of maltreatment were not equivalent in their potential contribution to negative developmental sequelae in children. This study found that aggression was the prominent behavior in abused children and was significantly related to the experiences of physical and emotional abuse and neglect. Physical abuse may damage children's emotional control and expressive skills; as a consequence, they may express their outrage or grief via direct actions. Aggression might also be a defensive strategy used by children suffering from abuse against the environment in which they are living. Through frequent exposure to parental conflict and/or fighting, children might model their parents' behavior during their physical and psychological growth. As a defensive strategy, aggression is adaptive and protective to children who live in abusive environments (Riedex et al., 1989). Duke et al. (2010), utilizing a sample of 136,549 adolescent students, found that more than 1 in 4 reported at least one experience of abuse by a household family member, and that this experience was significantly associated with subsequent perpetration of interpersonal violence.

Our results also showed that behavioral problems such as anxiety/depression were significantly associated with emotional abuse and neglect. Any subtype of abuse might adversely affect children's social behaviors. Furthermore, anxiety/depression might exacerbate social withdrawal. Abused children may lack social skills, have higher rates of being offensive, and adopt violent and aggressive behaviors learned from their parents. Delinquency was another predominant behavior in children exposed to DV, especially in abused boys. Delinquency was associated with emotional and physical abuse and physical neglect.

The current study shows that domestic violence may result in different behavioral problems for boys and girls. The CBCL total score and subscale scores of anxiety/depression, social interaction problems, attention problems, delinquency, aggression, and externalizing behaviors of boys exposed to domestic violence were significantly higher than those of the control group, whereas the differences of all of the CBCL scores in girls between the two groups were not significant. This indicates that the boys exposed to domestic violence

tended to suffer from more psychological and behavior problems. Ellis et al. (2009) also found that boys exposed to maltreatment experienced more delinquent behavior than girls, and an association existed between early physical and emotional traumatic experiences and psychopathy in detained boys, but not in girls. This previous report is consistent with our findings.

Gender differences in behavioral outcomes of DV exposure, if they prove consistent in future research, may be related to inherent biological differences of boys and girls. Compared with girls, boys tend to have intense and unstable characters. When boys are exposed to an environment with domestic violence or suffer from abuse, the stress may stimulate them to mobilize various psychological defensive mechanisms to actively resist. This may result in higher rates of aggression, delinquency, and other maladjusted behaviors. If these behaviors fail or become ineffective, they may fall into a psychological “exhausted period” with increased anxiety/depression, attention problems, and impaired social communication. On the other hand, gender roles in China may explain this difference in behavioral outcomes (Jackson et al., 2000). Generally speaking in Chinese culture, parents tend to encourage boys to be more aggressive, whereas these behaviors are discouraged in girls.

One of the interesting results in the current study is that the only significant difference between behaviors of abused children and children who only witnessed DV was the delinquency score ($p=.046$). No other scores from the CBCL were significantly different. This appears to contradict the finding of Wolfe et al. (2003) in their meta-analysis that children who suffered from domestic violence directly had more emotional and behavior problems than the exposure alone. Kaplan et al. (1998) found that children who suffered from abuse, especially from physical abuse, tended to have higher aggression, fighting, and antisocial behaviors than their peers when playing with others. Moreover, they had more delinquency and destructive behaviors in school than those who were neglected but not physically abused.

In this study, being abused and witnessing DV alone imposed almost the same influence on children’s behavioral problems. The probable explanation may be that both experiencing abuse and witnessing domestic violence have the same directional effect on the children’s cognition, though the magnitude of the effect may be different. In Chinese culture, most people recognize some degree of corporal punishment to children as normative behavior. Chinese proverb says that, “Education by beating can forge a good man,” and “beating and scolding are a special expression of care and concern.” The attitudes toward children condone a certain degree of beating and scolding by their parents. Just as the impact of witnessed and experienced violence on a child’s psyche might be basically the same, the influences on their behaviors may be similar. The negative interpersonal patterns within their families in childhood may be adopted in their adulthood, effectively continuing the cycle of violence. The extent of perpetrated involvement can be explained as a consequence of childhood abuse experiences (Reckdenwald et al., 2013; Gil-Gonzalez et al., 2008).

Limitations

The limitations of the study should be mentioned. Although the families were not sampled by random, we included as many families in the target community as possible that met our restrictive inclusion criteria in order to reduce potential sampling bias. Also, fear and stigma associated with domestic violence in traditional Chinese culture might have yielded a fallacious lower report, even though the assessments were completed in a private room and data were collected anonymously. In addition, our sample was recruited from only one site, and the sample size was small, which does limit generalizability. Given this small sample size and the limited sample environment, our findings are preliminary and warrant replication in larger samples in the future.

Conclusions and Implications

This study found that domestic violence imposed an adverse effect on behavior in children. Boys may suffer from more behavioral problems such as anxiety/depression, social interaction problems, attention problems, delinquency, aggression, and externalization. Children who have witnessed DV alone may have similar behavioral outcomes as abused children. Both abused children and those who witnessed DPV in Chinese communities need prevention and intervention to mitigate the impact on maladjusted behaviors, especially among boys. The effects of exposure to DV in childhood are negative in the long term, and this study adds to the increasing evidence for the development of programs designed to prevent and intervene in cases of domestic violence in China.

Acknowledgments

This research was supported by the National Natural Science Foundation in China (Grant #30670753), and American China Medical Board in New York, USA (Grant #01749)

References

- Achenbach TM, Edelbrock CS. Behavioral problems and competencies reported by parents of normal and disturbed children aged four through sixteen. *Monogr Soc Res Child Dev.* 1981; 46:1–82. [PubMed: 7242540]
- Bemstein, DP.; Fink, L. The Psychological Corporation. San Antonio: Harcourt Brace & Company; 1998. *Childhood Trauma Questionnaire. A Retrospective Self-report Manual.*
- Benjaminsen S, Krarup G, Lauritsen R. Personality, parental rearing behavior and parental loss in attempted suicide: a comparative study. *Acta Psychiatrica Scandinavica.* 1990; 82:389–397. [PubMed: 2281813]
- Cao YP, Zhang YL, Sun SQ, Yang SC, Zhong S, Peng YW, et al. An epidemiological study on domestic violence in Hunan, China. *Chinese Journal of Epidemiology.* 2006; 27:200–203. [PubMed: 16792883]
- Caspi A, Moffitt TE, Morgan J, Rutter M, Taylor AA, et al. Maternal expressed emotion predicts children's antisocial behavior problems: using monozygotic-twin differences to identify environmental effects on behavioral development. *Development Psychology.* 2004; 40(2):149–161.
- Chen CT, Yang NP, Chou P. Child maltreatment in Taiwan for 2004–2013: A shift in age group and forms of maltreatment. *Child Abuse & Neglect.* 2015; 22:S0145–S2134.
- Cicchetti D, Toth SL. A developmental psychopathology perspective on child abuse and neglect. *Journal of American Academy of Child and Adolescent Psychiatry.* 1995; 34:541–565.

- Cutajar MC, Mull PE, Ogloff JR, Thomas SD, Wells DL, Spataro J. Psychopathology in a large cohort of sexually abused children followed up to 43 years. *Child Abuse and Neglect*. 2010; 34:813–822. [PubMed: 20888636]
- Ding ZY. Pay attention on child abuse. *Chin J Pediatr*. 2000; 38(9):582–584.
- Dixon L, Browne K, Hamilton-Giachritsis C. Risk factors of parents abused as children: a meditational analysis of the intergenerational continuity of child maltreatment (Part I). *Journal of Child Psychology and Psychiatry*. 2005; 46:47–57. [PubMed: 15660643]
- Duke NN, Pettingell SL, McMorris BJ, Borowsky IW. Adolescent violence perpetration: associations with multiple types of adverse childhood experiences. *Pediatrics*. 2010; 125:e778–e786. [PubMed: 20231180]
- Ellis WE, Wolfe DA. Understanding the association between maltreatment history and adolescent risk behavior by examining popularity motivations and peer group control. *Journal of Youth and Adolescence*. 2009; 38:1253–1263. [PubMed: 19669904]
- English DJ, Marshall DB, Stewart AJ. Effects of family violence on child behavior and health during early childhood. *Journal of Family Violence*. 2003; 18:43–57.
- Fox RA, Plat ZDL, Bentley KS. Maternal factors related to parenting practices, developmental expectations and perceptions of child behavior problems. *Journal of Genetic Psychology*. 1995; 156:431–444. [PubMed: 8543930]
- Gilbert AL, Bauer NS, Carroll AE, Downs SM. Child exposure to parental violence and psychological distress associated with delayed milestones. *Pediatrics*. 2013; 132(6):e1577–e1583. [PubMed: 24190682]
- Gil-Gonzalez D, Vives-Cases C, Ruiz MT, Carrasco-Portino M, Alvarez-Dardet C. Childhood experiences of violence in perpetrators as a risk factor of intimate partner violence: A systematic review. *J Public Health*. 2008; 30:14–22.
- Gjone H. The association between internalizing and externalizing behavior in childhood and early adolescence: genetic of environmental common influences. *Journal of Abnormal Child Psychology*. 1997; 25:277–286. [PubMed: 9304444]
- Graham-Bermann SA, Perkins SM. Effects of early exposure and lifetime exposure to intimate partner violence (IPV) on child adjustment. *Violence & Victims*. 2010; 25(4):427–439. [PubMed: 20712143]
- Hahn HC, Lee Y, Ozonoff A, Van Wert MJ. The impact of multiple types of child maltreatment on subsequent risk behaviors among women during the transition from adolescence to young adulthood. *Journal of Youth and Adolescence*. 2010; 39:528–540. [PubMed: 20020190]
- Hill J. Biological, psychological and social processes in the conduct disorders. *Journal of Child Psychology and Psychiatry*. 2002; 43:133–164. [PubMed: 11848334]
- Hilton RB. Family configuration and child's personality. *Science*. 1992:227–236. [PubMed: 17794755]
- Jackson AP, Brooks-Gunn J, Hiang CC, Glassman M. Single mothers in low-wage jobs: financial strain, parenting, and preschoolers' outcomes. *Child Development*. 2000; 71:1409–1423. [PubMed: 11108104]
- Jankowski MK, Leitenberg H, Henning K, Coffey P. Intergenerational transmission of dating aggression as a function of witnessing only same-sex parents vs. opposite-sex parents vs. both parents as perpetrators of domestic violence. *Journal of Family Violence*. 1999; 24:267–279.
- Kaplan SJ, Pelcovitz D, Salzinger S, Weiner M, Mandel FS, Lesser ML, et al. Adolescent physical abuse: risk for adolescent psychiatric disorders. *The American Journal of Psychiatry*. 1998; 155:954–959. [PubMed: 9659863]
- Knutson JF. Psychological characteristics of maltreated children: Putative risk factors and consequences. *Annual Review of Psychology*. 1995; 46:401–431.
- Krischer MK, Sevecke K. Early traumatization and psychopathy in female and male juvenile offenders. *International Journal of Law and Psychiatry*. 2008; 31:253–262. [PubMed: 18514903]
- Lewis DO. From abuse to violence: Psycho-physiological consequences of maltreatment. *Journal of American Academy of Child and Adolescent Psychiatry*. 1992; 31:383–391.
- Liu N, Zhang YL, Brady HJ, Cao YP. Relation between childhood maltreatment and severe intrafamilial male-perpetrated physical violence in Chinese community: the mediating role of

- borderline and antisocial personality disorder features. *Aggressive Behavior*. 2012; 38:64–76. [PubMed: 22028215]
- Marwick C. Domestic violence recognized as world problem. *JAMA*. 1998; 279(19):1510. [PubMed: 9605879]
- Moffitt TE, Caspi A, Krueger RF, Lynn M, Gayla M, Phil AS, Ros S. Do partner agree about abuse in their relationship? A psychometric evaluation of interpartner agreement. *Psychological Assessment*. 1997; 9:47–56.
- Paradise JE, Rose L, Sleeper LA, Nathanson M. Behavior, family function, school performance, and predictors of persistent disturbance in sexually abused children. *Pediatrics*. 1994; 93:452–459. [PubMed: 8115205]
- Reckdenwald A, Mancini C, Beauregard E. The Cycle of Violence: Examining the Impact of Maltreatment Early in Life on Adult Offending. *Violence Vict*. 2013; 28(3):466–482. [PubMed: 23862310]
- Riedex C, Cicchetti D. An organizational perspective on cognitive control functioning and cognitive-affective balance in maltreated children. *Developmental Psychology*. 1989; 25:382–393.
- Rosen LN, Martin L. Long-term effects of childhood maltreatment history on gender-related personality characteristics. *Child Abuse Negl*. 1998; 22:197–211. [PubMed: 9589174]
- Schwab-Stone M, Chen C, Greenberger E, Silver D, Lichtman J, Voyce C. No safe haven II: the effects of violence exposure on urban youth. *J Am Acad Child Adolesc Psychiatry*. 1999; 38(4):359–367. [PubMed: 10199106]
- Schimmenti A, Passanisi A, Caretti V. Interpersonal and affective traits of psychopathy in child sexual abusers: evidence from a pilot study sample of Italian offenders. *J Child Sex Abus*. 2014; 23(7): 853–860. [PubMed: 25010088]
- Seng WS, Tao KT, Hsu J, Qiu JH, Li B, Goebert D. Longitudinal analysis of development among single and non-single children in Nanjing, China: ten-year follow-up study. *Journal of Nervous and Mental Disease*. 2002; 188:701–707.
- Sheeber L, Sorensen E. Family relationship of depressed adolescents: a multi-method assessment. *Journal of Clinical Child Psychology*. 1998; 27:268–277. [PubMed: 9789187]
- Wolfe DA, Crooks CV, Lee V, McIntyre-Smith A, Jaffe PG. The effects of children's exposure to domestic violence: a meta-analysis and critique. *Clinical Child and Family Psychology Review*. 2003; 6:171–187. [PubMed: 14620578]
- Wong WC, Chen WQ, Goggins WB, Tang CS, Leung PW. Individual, familial and community determinants of child physical abuse among high-school students in China. *Social Science & Medicine*. 2009; 68:1819–1825. [PubMed: 19344989]
- Wright MO, Crawford E, Del Castillo D. Childhood emotional maltreatment and later psychological distress among college students: the mediating role of maladaptive schemas. *Child Abuse Negl*. 2009; 33(1):59–68. [PubMed: 19167067]
- Yang SC, Zhang YL, Huang GP, Guo GY. A study on the Screen questionnaire of child abuse. *Chinese Journal of Behavioral Medical Science*. 2004; 13:223–224. (in Chinese).
- Yen CF, Yang MS, Yang MJ, Su YC, Wang MH, Lan CM. Childhood physical and sexual abuse: prevalence and correlates among adolescents living in rural Taiwan. *Child Abuse and Neglect*. 2008; 32:429–438. [PubMed: 18308392]
- Yue, DM. Rating Scales for Mental Health. Beijing: Publishing House of Chinese Mental Health Journal; 1999. Achenbach Child Behavior Checklist; p. 161-167.(in Chinese)
- Zhao XF, Zhang YL, Li LF, Zhou YF. Evaluation on reliability and validity of Chinese version of Child Trauma Questionnaire. *Chinese Journal of Clinical Rehabilitation*. 2005; 9:209–211. (in Chinese).
- Zielinski DS, Bradshaw CP. Ecological influences on the sequelae of child maltreatment: a review of the literature. *Child Maltreatment*. 2006; 11:49–62. [PubMed: 16382091]

Table 1

Descriptive Statistics on Children and Their Parents (M±SD, n/%)

Characteristics	Research group (n=93)	Control group (n=54)	t/χ^2	p
Age (years)	14.72±1.20	14.31±1.27	1.932	0.055
Gender				
Boy	71(76.3)	43(79.6)	0.212	0.645
Girl	22(23.7)	11(20.4)		
School mark				
Good	14(15.1)	10(18.5)		
Medium	47(50.5)	32(59.3)	2.430	0.297
Bad	32(34.4)	12(22.2)		
Maternal health care				
Good	60(64.5)	43(79.6)	5.001 ^a	0.167 ^b
Medium	28(30.1)	9(16.7)		
Bad	5(5.4)	2(3.7)		
Delivery status				
Uncomplicated	88(94.6)	52(96.3)	0.258 ^a	1.000 ^b
Complicated	5(5.4)	2(3.7)		
Childhood growth				
Good	62(66.7)	44(81.5)		
Medium	28(30.1)	8(14.8)	5.174 ^a	0.155 ^b
Bad	3(3.2)	2(3.7)		
Father's age (years)	40.20±5.51	38.85±5.30	1.455	0.148
Father's education level				
Senior school or higher	23(24.7)	14(25.9)		
Junior school	58(62.4)	36(66.7)	0.998 ^a	0.637
Primary school or lower	12(12.9)	4(7.4)		
Mother's age (years)	40.16±5.961	38.91±6.44	1.194	0.234
Mother's education level				
Senior school or higher	26(28.0)	10(18.5)		
Junior school	48(51.6)	37(68.5)	4.008	0.135
Primary school or lower	19(20.4)	7(13.0)		
Household composition				
Couple with 1 child	62(66.7)	35(64.8)		
Multi-generation family	25(26.8)	18(33.3)	1.829 ^a	0.393 ^b
Remarriage/single-parent family	6(6.5)	1(1.9)		
Household economic status				
Very good	11(11.8)	9(16.7)		
Good	24(25.8)	7(13.0)		
Medium	57(61.3)	35(64.8)	5.751 ^a	0.107 ^b
Bad	1(1.1)	3(5.5)		

Note:

^aFisher's exact Test;

^bBased on 10,000 sampled tables with starting seed 2,000,000.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2

Comparison between Two Groups on CBCL (M±SD)

Behavior problems	Research group (n=93)	Control group (n=54)	<i>t</i>	<i>p</i>
Withdrawal from society	2.90±3.00	2.39±2.66	1.043	0.299
Somatic problem	1.11±2.02	0.96±1.88	0.428	0.669
Anxiety/depression	3.10±3.40	1.76±2.35	2.813	0.006
Social interaction problem	1.85±1.82	1.22±1.60	2.106	0.037
Thought problem	0.53±0.87	0.48±0.84	0.309	0.757
Attention problem	3.40±2.86	2.28±2.20	2.656	0.009
Delinquency	2.80±2.88	1.65±2.15	2.542	0.012
Aggression	6.10±5.45	3.83±4.15	2.833	0.005
Externalizing	8.89±7.75	5.48±5.60	3.080	0.003
Internalizing	6.89±6.55	5.06±5.83	1.704	0.090
Total score	24.96±17.25	17.19±15.46	2.733	0.007

Table 3

Comparison between Two Groups on CBCL Stratified by Gender (M±SD)

Behavioral problems	Boys		<i>t</i>	Girls		<i>t</i>
	Research group (n=71)	Control group (n=43)		Research group (n=22)	Control group (n=11)	
Withdrawal from society	3.23±3.20	2.60±2.62	1.072	1.86±1.98	1.55±2.77	0.380
Somatic problem	1.08±1.82	0.91±1.78	0.509	1.18±2.63	1.18±2.68	0.000
Anxiety/depression	3.17±3.53	1.91±2.27	2.324 *	2.86±3.00	1.18±2.68	1.572
Social interaction problem	1.99±1.83	1.28±1.56	2.107 *	1.41±1.74	1.00±1.79	0.632
Thought problem	0.58±0.92	0.53±0.88	0.243	0.36±0.66	1.27±0.65	0.376
Attention problem	3.83±2.94	2.53±2.23	2.487 *	2.00±2.09	1.27±1.85	0.976
Delinquency	3.37±2.98	1.81±2.27	2.935 **	0.95±1.46	1.00±1.48	0.084
Aggression	6.55±5.27	4.23±4.27	2.386 *	4.64±5.38	2.27±3.38	1.327
Externalizing	9.92±7.87	6.05±5.85	2.789 **	5.60±6.44	3.27±4.00	1.088
Internalizing	7.24±6.74	5.35±5.35	1.565	5.77±5.94	3.91±7.63	0.773
Total score	27.14±17.26	18.44±14.95	2.739 **	17.91±15.57	12.27±17.17	0.948

Note:

* $p < .05$,** $p < .01$.

Table 4

Comparison between the Physically Abused and Witnessed on CBCL (M±SD)

Behavioral problems	Abused (n=52)	DPV Witnessed (n=41)	<i>t</i>	<i>p</i>
Withdrawal from society	3.39±3.30	2.38±2.70	1.426	0.158
Somatic problem	0.94±1.75	1.15±2.29	0.440	0.661
Anxiety/depression	3.27±3.83	2.54±3.05	0.905	0.369
Social interaction problem	2.40±1.89	1.62±1.87	1.752	0.084
Thought problem	0.70±0.92	0.41±0.68	1.522	0.133
Attention problem	3.72±2.54	3.18±3.30	0.795	0.429
Delinquency	3.55±3.78	2.03±2.13	2.048	0.046
Aggression	6.61±6.51	5.23±5.46	0.975	0.333
Externalizing	10.15±9.62	7.26±6.98	1.476	0.144
Internalizing	7.33±6.84	5.97±6.38	0.871	0.387
Total score	27.58±17.74	21.56±18.13	1.416	0.161

Table 5

Correlation between Scores of CBCL and CTQ-SF (r)

Behavioral Problems	Total CTQ	EA	PA	SA	EN	PN
Withdrawal from society	.172 *	.126	.069	.089	.156	.159
Somatic problem	.025	-.040	.072	-.004	.035	.030
Anxiety/depression	.229 **	.172 *	.157	.045	.227 **	.189 *
Social interaction problem	.328 **	.213 **	.261 **	.285 **	.265 **	.179 *
Thought problem	.169 *	.096	.152	.091	.146	.125
Attention problem	.247 **	.185 *	.196 *	.172 *	.190 *	.158
Delinquency	.241 **	.245 **	.234 **	.118	.115	.197 *
Aggression	.250 **	.183 *	.173 *	.073	.234 **	.210 *
Externalizing	.267 **	.221 **	.210 *	.096	.209 *	.222 **
Internalizing	.184 *	.118	.124	.060	.178 *	.160
Total score	.280 **	.204 *	.217 **	.125	.238 **	.217 **

Note:

* $p < .05$,** $p < .01$