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# Parenting discipline styles and child psychopathology in a clinical sample of Egyptian children in the Nile Delta region

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## Abstract

**Background:** Few, if any, studies evaluated the effect of violent parenting discipline on children's psychological well-being in the Nile Delta region. The current study aimed to explore the spectrum of violent versus non-violent parenting discipline styles practiced by a sample of Egyptian families who came for psychiatric advice in Tanta Psychiatry and Neurology Center and the effects of such styles on youth's problem behavior and psychiatric diagnoses. Two hundred and seven families were recruited and interviewed using the Kiddie Schedule of affective disorders and schizophrenia-present and life-time version "K-SADS-PL." Arabic translated and validated versions of the conflict tactics scale-parent child version (CTS-PC) and the child behavioral checklist questionnaire (CBCL) for ages 6–18 years were used to evaluate parenting discipline styles and child psychopathology, respectively.

**Results:** Youth ( $n = 207$ ) had an average age of  $10.8 \pm 2.8$  years and 30% were females. A significant association was noted between all forms of psychological and physical violence against children, in addition to neglectful parenting, and both internalizing and externalizing problems in offspring with no significant differences between mild and severe forms of violence. Parents who were sexually abused as children had more tendency to practice violent discipline strategies on their own children.

**Conclusions:** All forms of child maltreatment, even mild forms, have a considerable effect on the child psychological development. National policies and legalization should be implemented to decrease child maltreatment and protect children from all forms of physical and sexual abuse.

**Keywords:** Parenting, Violent, Discipline, Child, Psychopathology, Nile, Delta

## Background

Through the entire history of humankind, parenting discipline styles have been always playing a crucial contributing role in shaping the children's emotional well-being, cognitive capabilities, and behavioral patterns [1, 2]. Numerous studies have documented the significant impact of parenting behavior in both normal and pathological behavior in children and adolescents [3–6]. There is consensus that the goal of parenting is to establish positive affective relationships with offspring with the ability to set appropriate limits that ensure the development of

affectively balanced and responsible personalities [7]. The authoritative style, which is considered the most balanced style among the three parenting styles described by Diana Baumrind [8], has the strongest evidence to have a very small to small negative associations with externalizing problems [7].

The precipitating effect of violent discipline styles on both internalizing and externalizing problems in offspring has been widely recognized [1, 4, 6, 7, 9]. Behaviors such as shouting, screaming, slapping, and beating the child are known to have a harmful effect on the child's behavior, self-esteem, and academic life [9]. However, such parenting behaviors are still widely practiced in many parts of the world, especially low- and middle-

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income countries. A recent large survey that screened 215,885 children in 62 countries showed that 43% of children were spanked, in the past month [10]. A considerable debate, among both researchers and the public, still exists about the differential effect of physical abuse and milder forms of corporal punishment on the child's well-being and behavioral outcomes. The effect sizes of both practices on detrimental child outcome did not differ significantly in a recent large meta-analysis [11]

The public view of violent discipline practices also varies across different cultures [4, 10, 12]. For instance, some studies report that physical discipline might be related to higher levels of externalizing behaviors for European American adolescents but lower levels of externalizing behaviors for African American youth [13]. In addition, Chao [14] reported that authoritative parenting styles have less favorable impact on school performance of Asian American youth than their European American peers.

In Middle Eastern Arab societies, many parents believe that harsh and restrictive parenting practices will have a positive impact on their children's behavior and their school achievement [15]. A recent survey done by the UNICEF in three big Egyptian cities revealed that most children surveyed are still exposed to physical violence, with more violence happening at home than in the street [16]. In a study conducted among Saudi female college students, the majority of the sample reported that they were physically punished at various stages in their life and justified the discipline [17]. Some reports suggested a significant effect of parental education, economic level, and urbanization on parenting styles and practices. More educated parents were reported to be less authoritarian and controlling than uneducated parents in Egypt [18], Saudi Arabia [19], and Algeria [20]. Few studies [21–23] explored the effect of violent discipline on Arab children and reported that authoritarian and violent parenting styles had deleterious effects on the child's psychological well-being and social adjustment. However, these studies mostly focused on small samples of children with no psychiatric diagnoses and did not use standardized psychometric tools in order to compare results to those in other cultures.

A previous report by our team [24] described a significant effect of both corporal punishment and physical abuse, reported by parents, on predicting depression, ADHD, and disruptive behavior disorders in children referred to our tertiary clinic. To our knowledge, this is the first study that aims to explore the full spectrum of violent versus non-violent styles of discipline practiced by parents and the potential effect of such styles on mental and psychological well-being of children and adolescents in a sample of youth referred for psychiatric evaluation in the Nile Delta region. We hypothesize that

parenting styles that incorporate both psychological and physical aggression, widely accepted and practiced in our culture, will have a significant predictive effect on various internalizing and externalizing behavioral problems, in addition to specific psychiatric disorders, in this sample of Egyptian youth.

## Methods

This cross-sectional study describes the parenting styles reported by the parents of 207 children and adolescents and their possible associations with the internalizing and externalizing problems and psychiatric diagnoses of this sample of Egyptian youth. The studied families were recruited from the Child and Adolescent Psychiatry Outpatient Clinic in Tanta Psychiatry and Neurology Center, one of the few tertiary centers for child and adolescent psychiatry in the Nile Delta, during a period from November 2017 to November 2018 after obtaining a written consent from parents and a verbal assent from the child prior to participation in the study. All children who attended to the clinic during that period and met the inclusion criteria for the study were included. The study was approved by the Ethical Research Committee of the Faculty of Medicine, Tanta University, under the code 31892/11/17.

To be recruited in the study, children's age had to range from 8 to 18 years, with a complaint of emotional and behavioral problems and with intelligence quotient (IQ) more than 70. Each recruited family had to have at least one parent with 12 years or more of education to be able to fill out the required questionnaires, which was a prerequisite for the inclusion in the study. Patients and/or parents who did not meet the inclusion criteria were excluded from the study. Exclusion criteria also involved children/adolescents who were previously diagnosed with intellectual disability, autism spectrum disorder, or psychotic disorders as children with these disorders might be especially difficult to manage and parents dealing with them might need specific psychometric tools to evaluate their parenting behavior. Parents who gave a history of being diagnosed with any psychiatric disorder (e.g., depression, bipolar, or substance abuse) were also excluded as their parenting practices might differ from healthy parents.

Demographic and socio-economic data were collected for each family by qualified social workers. A detailed developmental, medical, and family history were then obtained by a child psychiatrist including birth complications, developmental milestones, and family history of psychiatric illness. The Arabic version of the Stanford-Binet Intelligence test - fourth edition [25, 26] was used to evaluate intellectual functions for all children. Socio-economic statuses (SES) of the families have been evaluated using a standardized scale, namely the modified

Fahmy and El-Sherbini scale for health research in Egypt [27, 28]. The second stage was to verify the presence or absence of a psychiatric disorder among the children and adolescents by using the Kiddie Schedule of affective disorders and schizophrenia-present and life-time version “K-SADS-PL” [29], a semi-structured interview that takes 45–75 min to administer. The Arabic translation of the K-SADS-PL used in the study has been validated on an Egyptian sample [30]. All the interviews were observed by competent interviewers and the diagnoses were confirmed by a qualified child and adolescent psychiatrist. Parenting discipline styles were evaluated using the conflict tactics scale–parent child version (CTS-PC) [31–33] which was previously translated and validated in Arabic by our team [34]. Both previous translation and current use of the scale were done after taking permission from the publisher of the scale (License WPS#001530). The (CTS-PC) is a practical, quick, and widely accepted assessment tool for domestic violence directed toward children at home. It gives only subscores which include non-violent discipline, psychological aggression, and physical aggression which breaks into mild (corporal punishment), moderate (physical assault), and severe (physical maltreatment). It also gives scores for weekly discipline, neglect, and sexual abuse directed from anyone toward the child or the parent himself/herself. The main scores reflect parenting behaviors practiced during the last year, but lifetime scores are also given to reflect the possible use of the discipline style before the last year. No total score is calculated from the CTS-PC. The behavioral and emotional problems were explored using the Arabic version of the Child Behavioral Checklist Questionnaire (CBCL) for ages 6–18 years [35]. The Child Behavioral Checklist (CBCL) reflects the behavior of the child in the last 6 months and gives scores for competence, syndrome, and DSM-oriented scales.

The sample size and power analysis were calculated using Epi-Info software statistical package created by the World Health Organization and Center for Disease Control and Prevention, Atlanta, Georgia, USA, version 2002. The sample size was calculated for a cross-sectional study design and 95% confidence interval. The expected association of parenting discipline styles and child psychopathology was 65% with a margin of error of 7 based on previous studies [1]. The sample size based on the previously mentioned criteria was found at  $N > 178$ . It was increased by 15% to be 207 to compensate for missed information and improving the quality of data of the study. Data were fed to the computer and analyzed using IBM SPSS software package version 20.0 [36]. Simple descriptive analysis was utilized to describe the demographic and clinical characteristics of the sample and then univariate linear regression was used to

find the effect of different predictors on CBCL Syndromic Scales while logistic regression was used to find the effect of different predictors on psychiatric diagnostic categories, and finally, univariate linear regression was used again to evaluate the predictor value of sexual abuse previously experienced by the parents for the parenting styles they practiced with their offspring. Significance of the obtained results was judged at the 5% level.

## Results

As presented in Table 1, our sample of children had a mean age of  $10.8 \pm 2.8$  years with a female representation of about 30% of the sample. Most of the children (85%) were accompanied by their mothers and almost half (50.7%) of the children had borderline intellectual abilities (IQ between 70 and 90). The most common diagnostic categories among the offspring were attention deficit hyperactivity disorder (ADHD) (54.1%), elimination disorders (16.4%), disruptive behavior disorders (14.5%), and depression (13%). Less common diagnoses included anxiety disorders (3.9%), tic disorders or stuttering (2.4%), OCD (1.9%), bipolar disorder (1.4), and trauma-related disorders (1%).

Table 2 shows the significant results of the univariate linear regression analysis of predictor variables for certain syndromic subscales of the CBCL as outcome variables. Unsurprisingly, our results highlight the significant effects of the family’s socioeconomic status (SES) and child’s IQ in predicting both child’s competence and level of problematic behavior reported. Higher

**Table 1** Demographic and clinical characteristics of the sample ( $n = 207$ )

| Demographic variables                               |                 |
|---|-----------------|
| Age (mean $\pm$ SD)                                 | 10.8 $\pm$ 2.8  |
| Female parents ( $N$ —%)                            | 176 (85%)       |
| Female children ( $N$ —%)                           | 64 (30.9%)      |
| SES (mean $\pm$ SD)                                 | 47.7 $\pm$ 12.1 |
| IQ median (min.—max.)                               | 84 (71–116)     |
| Diagnostic category                                 |                 |
| Borderline intellectual functioning (BIF) ( $N$ —%) | 105 (50.7%)     |
| ADHD ( $N$ —%)                                      | 112 (54.1%)     |
| Elimination disorders ( $N$ —%)                     | 34 (16.4%)      |
| Disruptive behavior disorders ( $N$ —%)             | 30 (14.5%)      |
| Depression ( $N$ —%)                                | 27 (13%)        |
| Anxiety disorders ( $N$ —%)                         | 8 (3.9%)        |
| Tic disorders ( $N$ —%)                             | 5 (2.4%)        |
| Stuttering ( $N$ —%)                                | 5 (2.4%)        |
| Obsessive-compulsive spectrum (OCS) ( $N$ —%)       | 4 (1.9%)        |
| Bipolar disorders ( $N$ —%)                         | 3 (1.4%)        |
| Trauma-related disorder ( $N$ —%)                   | 2 (1%)          |

**Table 2** Univariate linear regression for predictor variables significantly affecting CBCL Syndromic Scales

| CBCL Scale                         | Social     | Thought    | Attention  | Internalizing | Externalizing  | Total problems | Competence—activities | Social competence | Scholastic competence | Total competence |
|------------------------------------|------------|------------|------------|---------------|----------------|----------------|-----------------------|-------------------|-----------------------|------------------|
| <b>Socioeconomic status</b>        |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           |            |            |            |               | -0.15*         |                | 0.11*                 |                   | 0.19*                 | 0.09*            |
| <b>C.I.</b>                        |            |            |            |               | -0.26 to -0.04 |                | 0.04-0.19             |                   | 0.09-0.28             | 0.02-0.16        |
| <b>IQ</b>                          |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           |            |            |            |               |                |                | 0.15*                 | 0.12*             | 0.30*                 | 0.22*            |
| <b>C.I.</b>                        |            |            |            |               |                |                | 0.05-0.25             | 0.01-0.24         | 0.18-0.42             | 0.13-0.30        |
| <b>Non-violent Discipline</b>      |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           |            |            |            |               | 0.06*          | 0.05*          |                       |                   |                       |                  |
| <b>C.I.</b>                        |            |            |            |               | 0.007-0.1      | 0.004-0.09     |                       |                   |                       |                  |
| <b>Psychological aggression</b>    |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.05*      | 0.05*      | 0.05*      |               | 0.1*           | 0.06*          |                       |                   |                       |                  |
| <b>C.I.</b>                        | 0.008-0.08 | 0.008-0.09 | 0.01-0.09  |               | 0.06-0.2       | 0.03-0.09      |                       |                   |                       |                  |
| <b>Physical aggression (total)</b> |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.04*      | 0.04*      | 0.04*      | 0.06*         | 0.05*          |                |                       |                   |                       |                  |
| <b>C.I.</b>                        | 0.02-0.06  | 0.02-0.06  | 0.02-0.06  | 0.04-0.08     | 0.03-0.06      |                |                       |                   |                       |                  |
| <b>Corporal punishment</b>         |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.06*      | 0.07*      | 0.07*      | 0.04*         | 0.09*          | 0.08*          |                       |                   |                       |                  |
| <b>C.I.</b>                        | 0.03-0.09  | 0.04-0.11  | 0.04-0.11  | 0.01-0.08     | 0.06-0.13      | 0.05-0.10      |                       |                   |                       |                  |
| <b>Physical assault</b>            |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.15*      | 0.15*      | 0.11*      | 0.19*         | 0.16*          |                |                       |                   |                       |                  |
| <b>C.I.</b>                        | 0.09-0.21  | 0.09-0.21  | 0.05-0.17  | 0.14-0.26     | 0.11-0.21      |                |                       |                   |                       |                  |
| <b>Physical abuse</b>              |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.09*      | 0.11*      | 0.09*      | 0.18*         | 0.13*          |                |                       |                   |                       |                  |
| <b>C.I.</b>                        | 0.02-0.17  | 0.03-0.19  | 0.006-0.17 | 0.09-0.26     | 0.064-0.20     |                |                       |                   |                       |                  |
| <b>Neglect</b>                     |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           | 0.12*      | 0.14*      | 0.11*      | 0.19*         | 0.13*          |                | -0.06*                |                   | -0.05*                |                  |
| <b>C.I.</b>                        | 0.06-0.18  | 0.07-0.20  | 0.05-0.18  | 0.12-0.25     | 0.08-0.19      |                | -0.119 to -0.009      |                   | -0.097 to -0.008      |                  |
| <b>Sexual abuse—child</b>          |            |            |            |               |                |                |                       |                   |                       |                  |
| <b>B</b>                           |            |            |            |               | 7.92*          |                |                       |                   |                       |                  |
| <b>C.I.</b>                        |            |            |            |               | 2.42-17.51     |                |                       |                   |                       |                  |

B Instandardized coefficients, CI confidence interval

\*Statistically significant at  $p \leq 0.05$

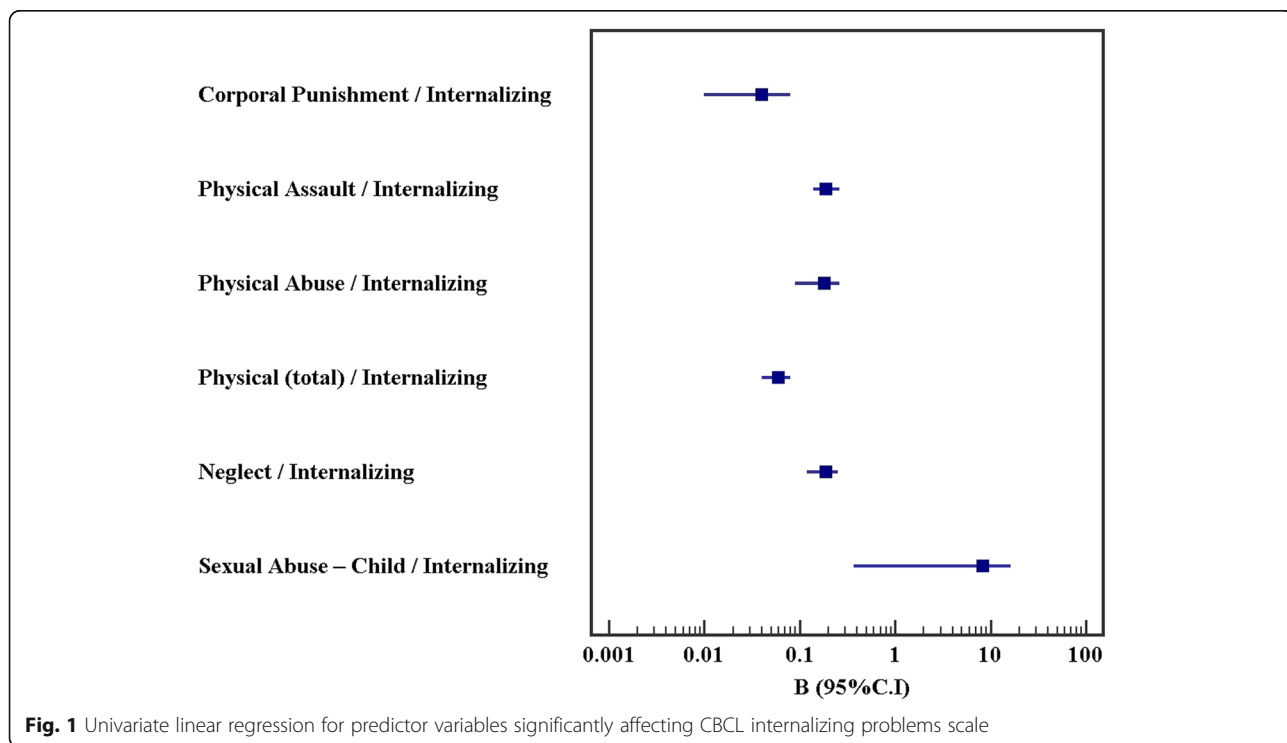
IQ and SES were both associated with better competence in scholastic achievement ( $B = 0.3$  for IQ and 0.19 for SES), leisure activities ( $B = 0.15$  for IQ and 0.11 for SES), and total competence ( $B = 0.22$  for IQ and 0.09 for SES), but only higher IQ was associated with better social performance ( $B = 0.12$ ). Higher SES of the family did not predict better social competence but did predict fewer externalizing problems in the child ( $B = - 0.15$ ).

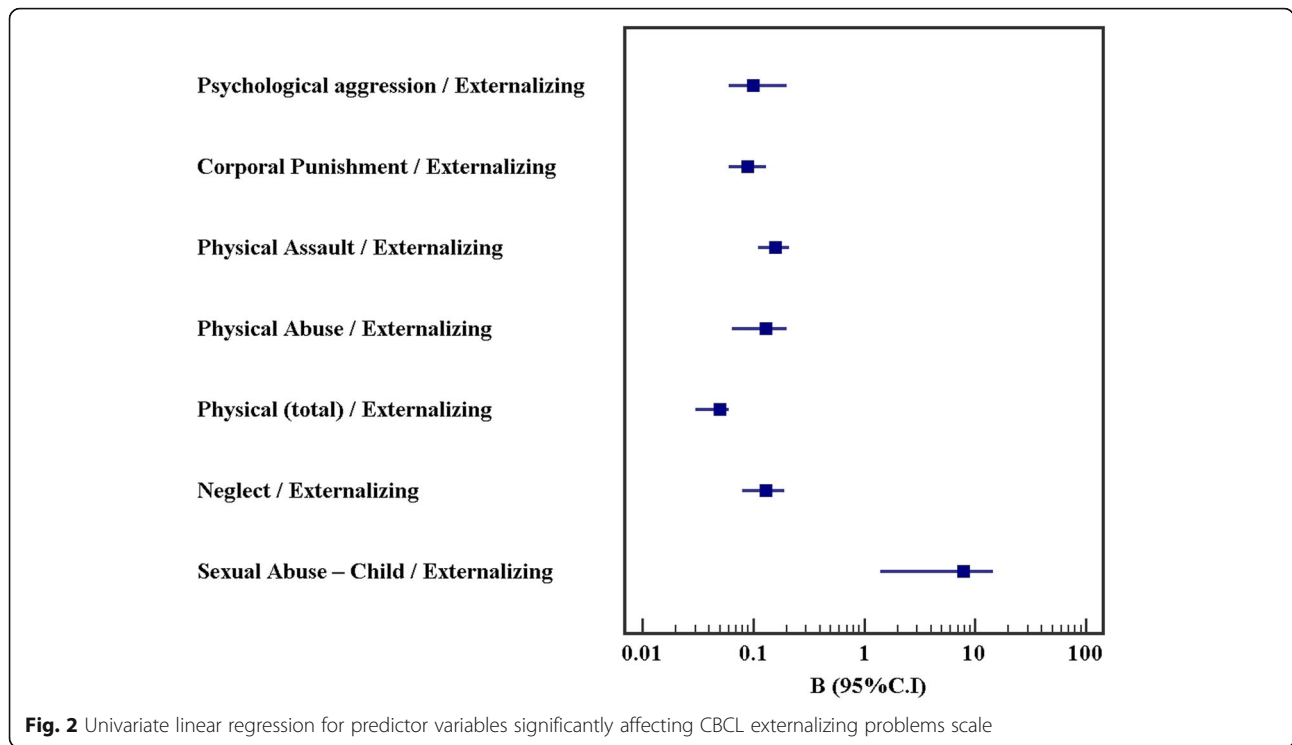
Non-violent discipline practiced by the parents had the least significant contribution among other CTS-PC subscores in predicting externalizing ( $B = 0.06$ ) and total behavioral problems ( $B = 0.05$ ). The use of psychological aggression against the child, such as yelling, screaming, or threatening him/her), significantly predicted more social, thought, attention, externalizing, and total problems ( $B = 0.05, 0.05, 0.05, 0.1,$  and  $0.06$ ), respectively. The use of any type of physical punishment against the child significantly predicted more internalizing (Fig. 1) and externalizing (Fig. 2) problems ( $B = 0.06, 0.05$ ) in addition to more social, thought, and attention problems ( $B = 0.04, 0.04, 0.04$ ), respectively. Breaking up physical aggression into three levels of severity, namely corporal punishment, physical assault, and physical maltreatment, did not yield different results. In other words, physical punishment predicted the same outcomes regardless of the severity of the assault. The neglect of the child also predicted more social ( $B = 0.12$ ), thought ( $B = 0.14$ ), attention ( $B = 0.11$ ), internalizing ( $B = 0.19$ ), and

externalizing problems ( $B = 0.13$ ) in addition to less competence in activities ( $B = - 0.06$ ) and scholastic activities ( $B = - 0.05$ ) of the child. Positive history for sexual abuse experienced by the child had a much higher predictor effect on attention ( $B = 9.97$ ), internalizing ( $B = 8.37$ ), and externalizing problems ( $B = 7.92$ ).

The predictor value of the various discipline styles on KSADS-PL diagnostic categories was then explored using logistic regression (Table 3, Fig. 3). Children with higher SES were more likely to receive the diagnosis of anxiety disorders (OR = 1.19). Neglect during the last year predicted the diagnosis of disruptive behavior disorders (OR = 1.2). On the other hand, the diagnosis of stuttering was predicted by lifetime occurrence of psychological aggression (OR = 2.34). Further analysis of multiple levels of severity of physical aggression revealed that the predictor effect came mainly from moderate aggression (physical assault) and not from mild or severe cases. The diagnosis of tic disorders was more likely to be given to children subjected to lifetime exposure to neglect (OR = 7.64).

Finally, univariate linear regression revealed that sexual abuse experienced by the parents when they were children predicted more physical aggression, especially moderate and severe forms, practiced by them on their own children (OR = 48.65) (Table 4, Fig. 4). Parents subjected to sexual abuse were also more likely to neglect their own children as parents (OR = 20.85).





**Discussion**

The current study reports robust positive association between all forms of psychological and physical violence against children and both internalizing and externalizing problems in offspring with no significant differences between milder forms of corporal punishment, classically accepted in our culture, and severer forms of violence and abuse. Neglect had a similar impact on the psychological well-being of the children with further detrimental effect on children’s competence. Non-violent discipline had the least significant role in increasing

externalizing problems in our sample and no significant effect on internalizing problems. Sexually abused children were more likely to have internalizing and externalizing problems while parents who were sexually abused as children had more tendency to practice violent discipline strategies on their own children.

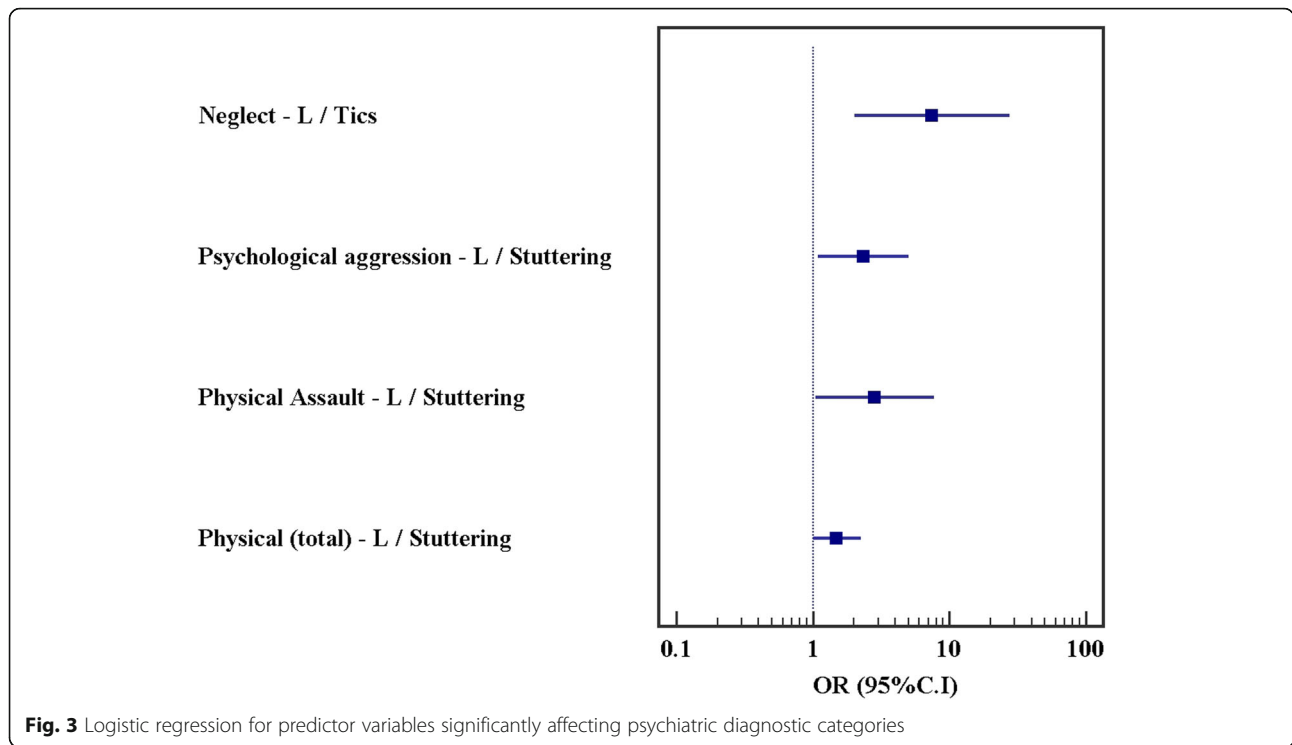
The predictive value of IQ in the child’s performance noticed in our results is a well-established and frequently reported result [37–40]. Our findings also supported the direct effect of the family’s SES on externalizing problems. These results replicate what was previously

**Table 3** Logistic regression for predictor variables significantly affecting psychiatric diagnostic categories

| Diagnosis                  | ADHD | Disruptive | Elimination | TRD | OCS | Depression | BP | Anxiety   | Tics       | Stuttering |
|----------------------------|------|------------|-------------|-----|-----|------------|----|-----------|------------|------------|
| SES                        | OR   |            |             |     |     |            |    | 1.19*     |            |            |
|                            | C.I. |            |             |     |     |            |    | 1.07–1.31 |            |            |
|                            | C.I. |            |             |     |     |            |    |           |            |            |
| Psychological aggression—L | OR   |            |             |     |     |            |    |           |            | 2.34*      |
|                            | C.I. |            |             |     |     |            |    |           |            | 1.09–5.03  |
| Physical Assault—L         | OR   |            |             |     |     |            |    |           |            | 2.83*      |
|                            | C.I. |            |             |     |     |            |    |           |            | 1.04–7.67  |
| Neglect                    | OR   | 1.02*      |             |     |     |            |    |           |            |            |
|                            | C.I. | 1.01–1.04  |             |     |     |            |    |           |            |            |
| Neglect—L                  | OR   |            |             |     |     |            |    |           | 7.46*      |            |
|                            | C.I. |            |             |     |     |            |    |           | 2.03–27.46 |            |

OR odds ratio, CI confidence interval, L lifetime occurrence but not in the past year  
 \*Statistically significant at  $p \leq 0.05$





reported in several Western and Eastern cultures [41–44]. Children coming from high SES families suffered more anxiety disorders, a finding that does not seem to replicate previously reported results which mostly link lower SES with higher rates of anxiety disorders [45–48]. This apparent contradiction might be attributed to the small number of children diagnosed with these diagnostic categories in our sample.

The relationship between certain parenting discipline styles and children’s internalizing and externalizing behaviors is supported by several previous reports in several diverse cultures [3, 5–7, 10, 16, 49–52]. The current study reports a slightly significant relationship between the non-violent discipline of parents and the children’s externalizing and total problems. This result goes along with the previously reported results [7] which noticed a low rate of psychiatric problems in children exposed to

authoritative discipline. These findings may be explained by the multi-factorial pathogenesis of psychiatric disorders in which the relationship between any type of discipline and behavioral problems in children is mediated by genetic predisposition, in addition to other biological and social factors.

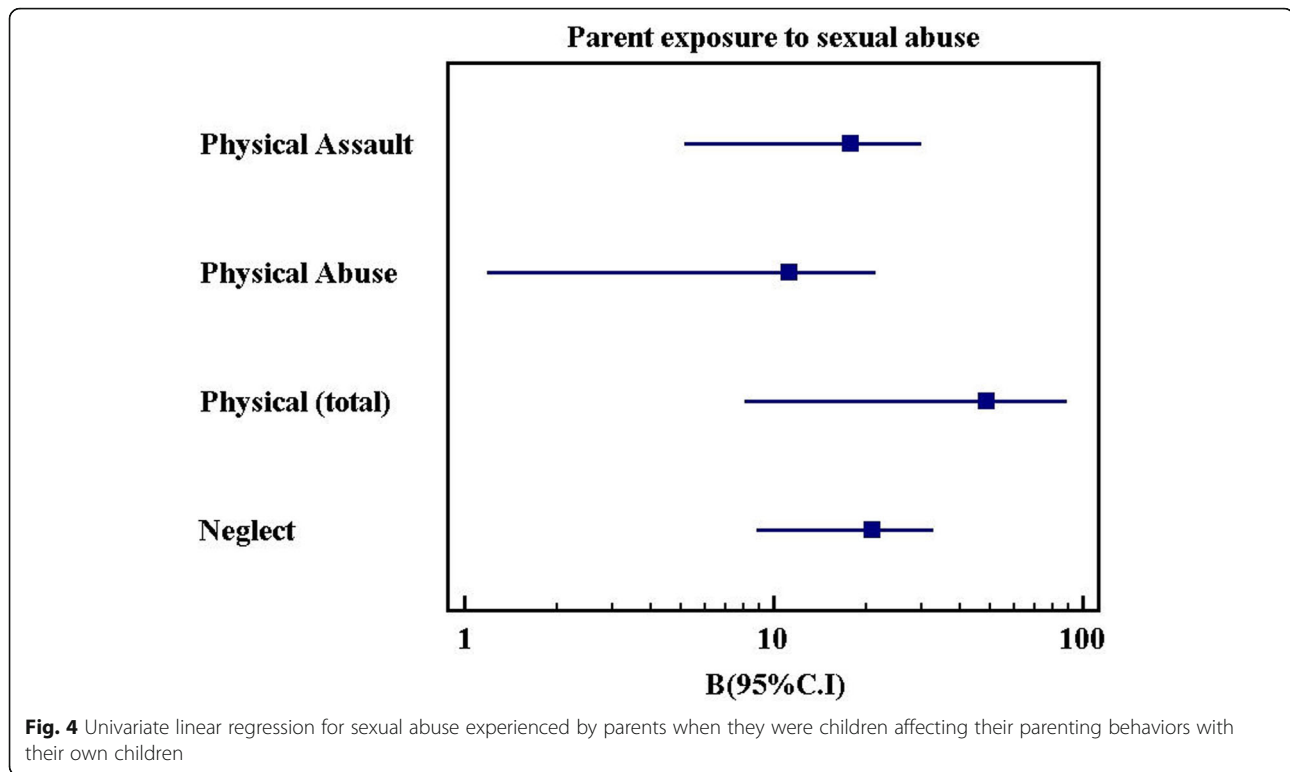
According to the UNICEF survey [16] in three major Egyptian cities, physical punishment was widely seen as a legitimate disciplinary method by children, parents, and teachers. The current study emphasizes the negative effects of corporal punishment on children’s well-being confirming what was reported in other cultures [11, 53–56]. The results of the current study contradict and might help to correct the common belief that mild physical violence is not psychologically harmful to children. The current study has also reported a significant association between parental psychological aggression and the

**Table 4** Univariate linear regression for sexual abuse experienced by parents when they were children affecting their parenting behaviors with their own children

| Outcome                     | Sexual abuse experienced by the parent when he/she was a child |                      |
|-----------------------------|--|----------------------|
|                             | <i>p</i>   | <i>B</i> (95% CI)    |
| Physical aggression (total) | 0.019*   | 48.65 (8.096–89.193) |
| Physical assault            | 0.006*   | 17.69 (5.158–30.211) |
| Physical abuse              | 0.029*   | 11.26 (1.190–21.321) |
| Neglect                     | 0.001*   | 20.85 (8.836–32.866) |

*B* unstandardized coefficients, *CI* confidence interval

\*Statistically significant at  $p \leq 0.05$



social, thought, attention, and externalizing problems in meticulous children. The same findings were previously reported by McKee and colleagues [57] who reported that harsh verbal parenting had a direct effect on both internalizing and externalizing behavior of youth. Other researchers [58] also documented that rejecting behavior of parents and inconsistent parenting were associated with aggression and anti-social behavior in children.

In the current study, child neglect was linked to social, thought, and attention problems as well as externalizing and internalizing disorders. These results replicate the results of several studies [59, 60] which reported a negative relationship between the degree of parental monitoring and the intensity of childhood socio-emotional and behavioral problems. However, Stevens and his colleagues [4] have reported a significant relationship between parental care and behavioral problems in adolescents only, and not in children. Our study confirmed the multiple previous findings that emphasize the powerful significant association between sexual abuse and externalizing problems and internalizing problems of children and adolescents [61–65].

We also report that children treated with neglect were more likely to be diagnosed with disruptive behavior disorders, a result that was previously reported in several other cultures [66–68]. Children who have previously received aggressive treatment, both psychologically and physically, were more likely to receive the diagnosis of

stuttering. Again, several previous studies, including some studies carried out in the Arab countries [69–71], reported the direct correlation between violent, rejecting, and neglecting parenting behaviors and childhood stuttering. Previous lifetime neglect was also associated with the diagnosis of tics. This finding, not reported before in the literature, might reflect the psychopathological role of tics in drawing the attention of neglectful parents to the child. A previous study [72] reported a decreased rate of tics in maltreated children and attributed this result to the possible trial of the children to suppress their tics when risking punishment for them by their parents.

According to the World Health Organization [73], about 20% of women and 5–10% of men have been sexually abused as children. To our knowledge, this is the first study to explore the parenting experience of Arab-speaking parents who had been sexually abused when they were children. We report a much higher probability of these parents to use more violent discipline styles, such as psychological and physical aggression against their own children in addition to a much higher probability to be more neglectful toward these children. Some previous studies reported a significant relationship between child sexual abuse and lower parenting self-efficacy and more permissive parenting [74] while other studies suggested that parenting is not generally problematic in previously abused parents and even might be a healing experience for them [75, 76]. These conflicting



results call for further research to investigate the relationship between physical and sexual abuse of children and their parenting behavior.

Before we conclude, we would like to discuss the limitations of this study. First, the relatively small clinical sample might make it difficult to generalize the results of this study on Egyptian society. Larger community samples are needed to explore the patterns of parenting among the general population. Second, the collection of parent reports about their children without self-reports or teacher reports might subject the results to personal attitudes and bias from parents when judging their own behavior and the behavior of their children. Third, the current cross-sectional design of the study could not exclude the possible two-directional association between violent parenting and child psychopathology. Future prospective studies are crucially needed to confirm that the onset of harsh violent parenting predates the onset of child psychopathology. Fourth, the exclusion of parents with psychiatric disorders and children with intellectual disability, autism spectrum disorder, or psychotic disorders might be considered as a selection bias that led to a better than real world results. Fifth, different comorbidities between disorders were not calculated as the study was based only on the primary diagnosis of each case. The predominance of the male gender and the diagnosis of ADHD might make it difficult to extrapolate the result on larger community samples. Finally, the absence of a comparison control group might add to the limitations of the current study. A case-control study design needed to explore our hypothesis would be to have a control group with absolutely no use of parenting violent styles, which is very hard to recruit in our culture, and investigate the levels of psychopathology in their offspring.

## Conclusions

This study has investigated different parenting disciplines in a sample of Egyptian children and concluded that all forms of child maltreatment, even mild forms, are associated with increased levels of internalizing and externalizing problems in offspring. These findings may be helpful in the future to diminish the risk of psychopathology in youth in Arab Egyptian society by suggesting specially designed parenting programs to educate parents on how to deal with their children's problems and to early identify children exposed to negative parenting. National policies and legalization should be implemented to decrease child maltreatment and protect children from all forms of physical and sexual abuse.

## Abbreviations

ADHD: Attention deficit-hyperactivity disorder; CBCL 6-18: Child behavioral checklist questionnaire for ages 6–18; CTS-PC: Conflict tactics scale–parent child version; DBD: Disruptive behavior disorders; DSM-5: Diagnostic and

Statistical Manual of Mental Disorders–version 5; IBM: International Business Machines; ID: Intellectual disability; IQ: Intelligence quotient; K-SADS-PL: Kiddie Schedule of affective disorders and schizophrenia–present and lifetime version; MINI-Kid: MINI International Neuropsychiatric Interview for Children and Adolescents for parents and with children and adolescents; OCD: Obsessive-compulsive disorder; OR: Odds ratio; SPSS: Statistical Package for the Social Sciences; UNICEF: United Nations International Children's Emergency Fund

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## Authors' contributions

MS played a major role in conceptualizing the aim and hypothesis of this work, confirming the diagnoses of all recruited subjects, analyzing the data, and writing the manuscript. RA had a substantial contribution in recruiting and interviewing families, reviewing the literature, and shared in writing the manuscript. Both authors approved the submitted version (and any substantially modified version that involves the author's contribution to the study).

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## Availability of data and materials

The dataset created and analyzed during the current study will be available from the corresponding author on reasonable request.

## Ethics approval and consent to participate

A written consent from parents and a verbal assent from the child were obtained prior to participation in the study. The study was approved by the Ethical Research Committee of the Faculty of Medicine, Tanta University, under the code 31892/11/17.

## Consent for publication

Not applicable.

## Competing interests

All authors report no biomedical financial interests or potential conflicts of interest.

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