

# The use of physical punishment among parents of children with ADHD and normal development

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## Abstract

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**Purpose:** The use of physical punishment by parents varies across cultures. Parents of children with attention deficit hyperactivity disorder (ADHD) might use physical punishment at a higher rate than other parents due to the prevalence of behavioral problems among their children. This study compared the use of physical punishment by parents of children with ADHD and parents of typically developed (TD) children.

**Method:** This descriptive and comparative study used a sample of 100 parents, including 50 parents (25 mothers and 25 fathers) with children aged 7–17 years who were diagnosed with ADHD (ADHD group) and an equal number of parents with children who were not diagnosed with ADHD (TD group). Both groups were recruited using convenience sampling at a psychiatric clinic.

**Results:** The two groups had comparable demographic information. The ADHD group used physical punishment at a higher rate than the TD group ( $P=0.001$ ) even when the parents were grouped by sex. In the TD group, the mothers used physical punishment twice as often as the fathers (40% and 20%, respectively;  $P=0.00$ ). Most parents in the ADHD and TD groups had been subjected to physical punishment as children (74% and 64%, respectively). The prevalence of physical punishment against the TD children (30%) was significantly lower than the prevalence of past violence against their parents. The parental opinions of physical punishment as a disciplinary method did not significantly differ between the groups ( $P=0.294$ ). Both groups made similar decisions regarding the use of physical punishment ( $P=0.235$ ).

**Conclusion:** Practitioners working with ADHD children should inquire about the use of physical punishment during their assessments due to its harmful effects.

**Keywords:** ADHD, Bahrain, children, normal development, physical punishment.

## Introduction

The American Academy of Child and Adolescent Psychiatry has recommended that experts collect information on harsh treatment when diagnosing attention deficit hyperactivity disorder (ADHD; Pliszka, 2007). ADHD is a common diagnosis among children with psychiatric disorders, and an estimated 2.5–5%



of all children are diagnosed with ADHD (American Psychiatric Association, 2013). ADHD is clinically characterized by hyperactivity, inattention, impulsivity, and impairment (Roberts et al., 2015).

Corporal punishment (CP) is part of child maltreatment, which includes physical and sexual abuse and neglect (Craig et al., 2020). CP is a method of discipline employed by supervising adults on children that deliberately inflicts pain on them. The adults do not intend to injure these children. Rather, the adults seek to change their behavior to what they consider to be acceptable and correct (AACAP, 2014; Straus, 2008). However, the way that children are treated by authoritarian figures negatively affects their personality regardless of the method (Alampay, 2017). Children treated with involvement, acceptance, emotional availability, warmth, and responsiveness more often develop a stable personality than those who are not (Cummings, 2000). Likewise, children exposed to harsh physical punishments develop behavioral problems such as aggression (Del Hoyo-Bilbao et al., 2017), hyperactivity (Gershoff and Grogan-Kaylor, 2016), antisocial behavior (Straus, 1997), and an inability to adjust to their environment.

Evidently, CP is implemented in and often accepted by many cultures worldwide. An abundance of literature has discussed this topic (Lansford et al., 2010, Gershoff, ET and Grogan-Kaylor, AT 2016). To a lesser degree, some literature has addressed the use of CP on children with ADHD. Spanning nine countries, a multicenter study found that beliefs of CP varied based on necessity. In addition, the mothers used CP more frequently than the fathers, and the sons more frequently received CP than the daughters (Lansford et al., 2010). Another study analyzed CP in schools across 63 countries, and the researchers found no evidence that CP promoted learning. Notably, CP was correlated with physical harm, mental and behavioral health problems, and impaired achievement (Gershoff, 2017). A study in Poland looked at 82 parents of children with ADHD who attended a training program, and it reported that 95% of the participants physically punished their children. These parents also used more severe punishments than the parents of typically developed (TD) children. Additionally, the researchers noted that the recurrence of physical punishment affected ADHD symptoms (Błachno et al., 2006).

Researchers in Iran determined a relationship between self-confidence, warmth, involvement, and the use of physical punishment by parents. The parents of ADHD children used more CP and fewer positive methods compared to the parents of TD children (Alizadeh et al., 2007). A Korean study looked at two groups of mothers with ADHD children: those who used physical punishment and those who did not. The mothers who use physical punishment were more depressed, possibly leading to the use of physical punishment on their children (Shin and Stein, 2008). In Brazil, researchers selected a sample of 22 children with ADHD and their mothers. The results identified a positive correlation between the use of physical punishment and negligence with the behavioral problems of their children (Teixeira et al., 2015). Two Taiwanese studies compared the mother-child and father-child relationships of 337 and 296 children with ADHD and 223 and 229 TD children, respectively. Both studies found that the ADHD groups received less empathy and care and their parents were more protective and controlling. These parents received less family support and were also more neurotic and depressed (Gau and Chang, 2013).

To the best of the authors' knowledge, no published studies have investigated the use of physical punishment by parents of children with ADHD in the Gulf Cooperation Council.

This study examined the prevalence of physical punishment and its characteristics by comparing parents of children with ADHD and parents of TD children. The authors hypothesized that the parents of children with ADHD would practice physical punishment more often than the parents of TD children.

## **Materials and Methods**

### **Design and Participants**

The present study used a cross-sectional, comparative group design with a one-to-one case comparative group ratio. The ADHD group consisted of 50 parents of children who were previously diagnosed with ADHD in a local primary care center. Data were collected during the second semester of 2020. Each child from the ADHD group was diagnosed according to the criteria of the Diagnostic and Statistical Manual number 5 (DSM-5; APA, 2013) and Conners' test for parents and teachers (Kao and Thomas, 2010). The comparative group (TD group) consisted of parents with children or adolescents from the same age group as the sample who had not previously been diagnosed with any medical or neuropsychiatric disorders. The control featured friends, acquaintances, and families of the staff of the same health facilities. Parents of children with an intelligence quotient (IQ) less than 70 were excluded.

### **Sample Size and Data Collection**

The sample consisted of parents of 50 ADHD and 50 TD children. Each group contained 25 mothers and 25 fathers, meaning that a total of 100 parents were included in this study. Data were collected via an interview-guided questionnaire. Each participant took approximately 10 minutes to complete the form. The questionnaire had two parts. The first contained questions that collected demographic data. The second had seven questions regarding physical punishment, covering the method, reason, frequency, if the parents themselves had been punished similarly as children, and if the parents believed that physical punishment was beneficial (see Appendix 1). The questionnaire used semi-closed-ended questions. Both groups were recruited via convenience sampling at the psychiatric clinic.

### **Ethical Considerations**

The Bahraini Ministry of Health's Research Committee Secondary Care provided ethical clearance and approval for this study. Each child and their guardians received a permission document. The researchers read this document to them and clarified that their participation would not affect the services provided to them or their children, their participation was voluntary, and they could withdraw from the study at any time. Those parents who admit severe and/or recurrent type of physical punishment that result in injury will be counseled.

### **Statistical Analysis**

The Statistical Package for the Social Sciences (SPSS) version 25 was used to analyze the data. The demographic data and outcome indicators were summarized using descriptive statistics. The means and standard deviations (SDs) of the continuous variables and the counts and percentages of the categorical variables were determined. To explore the differences between the groups, Pearson's chi-squared tests and independent samples t-tests were employed as needed. All tests were two tailed.

## Results

The groups were similar concerning their employment (44% of ADHD fathers and 40% of TD fathers worked, 30% of ADHD mothers and 26% of TD mothers worked, and 12% of the mothers in each group were homemakers). Both groups were also similar in their education levels (36% of ADHD fathers and 38% of TD fathers had a higher education, 36% of ADHD mothers and 26% of TD mothers had a higher education) (Table 1) and the mean ages of the parents and their children. The mean ages were 46.79 and 43.86 for the fathers, 39.71 and 35.42 for the mothers, and 9.41 and 7.22 for the children in the ADHD and TD groups, respectively. Notably, 68% of the parents (60% of fathers and 68% of mothers) in the ADHD group used physical punishment compared to 30% of the parents (20% of fathers and 40% of mothers) in the TD group, which was a significant difference ( $P=0.001$ ). The TD group represented a sample from the community. In this group, the rate of physical punishment use by generation dropped in favor of the younger generation (64% of parents beaten and 30% of children beaten;  $P=0.000$ ; Table 2). When comparing the physical punishment use of fathers and mothers inside each group, the results were similar for the parents in the ADHD group. However, the mothers in the TD group used physical punishment more frequently than the fathers in the same group ( $P=0.000$ ). Both groups had similar parental opinions regarding the use of physical punishment, and the differences were not statistically significant ( $P=0.294$ ; Table 3).

**Table 1.** Group demographic characteristics by gender, education, and employment status

Item	ADHD group		TD group	
	N	%	N	%
<b>Gender</b>				
Male	25	50	25	50
Female	25	50	25	50
<b>Employment</b>				
<b>Fathers</b>				
Working	22	44	20	40
Not working	0	0	0	0
Retired	3	6	5	10
<b>Mothers</b>				
Working	15	30	13	26
Not working	4	8	5	10
Retired	0	0	1	2
Homemaker	6	12	6	12
<b>Education</b>				
<b>Fathers</b>				
Primary	1	2	1	2
Secondary	6	12	5	10
College	18	36	19	38
<b>Mothers</b>				
Primary	1	2	1	2
Secondary	6	12	11	22
College	18	36	13	26

**Table 2.** Parents' responses to the study questions by group

Questions	ADHD group		TD group		P value
	N	%	N	%	
Do you use physical punishment? (Total)					
Yes	32	64	15	30	0.001
No	18	36	35	70	
Do you use physical punishment? (Fathers)					
Yes	15	60	5	20	0.000
No	10	40	20	80	
Do you use physical punishment? (Mothers)					
Yes	17	68	10	40	0.000
No	8	32	15	60	
Were you exposed to physical punishment when you were young?					
Yes	37	74	32	64	0.001
No	13	26	18	32	
Do you agree with the use of physical punishment?					
Strongly agree	0.0	0.0	1	2	0.294
Agree	1	2	4	8	
Neutral	16	32	18	36	
Disagree	22	44	16	32	
Strongly disagree	11	22	11	22	
Significant values $\leq 0.05$					

**Table 3.** Physical punishment use by group and parent's gender

Group	N	%	P value
<b>ADHD group</b>			
Fathers			
Yes	15	60	0.556
No	10	40	
Mothers			
Yes	17	68	
No	8	32	
<b>TD group</b>			
Fathers			
Yes	5	20	0.000
No	20	80	
Mothers			
Yes	10	40	
No	15	60	
Significant values $\leq 0.05$			

## Discussion

This study aimed to determine the prevalence of physical punishment among children with ADHD in comparison to TD children. Our study revealed that physical punishment was more common among the ADHD group and practiced equally by both parents. In contrast, the mothers in the TD group used physical punishment more often than the fathers. The parents in the ADHD group had received physical punishment more frequently as children compared to the TD group. Notably, the rate of physical punishment declined between generations. This finding is in line with several studies from different parts of the world (Lansford et al., 2010; Błachno et al., 2006; Alizadeh et al., 2007).

There is some evidence that interpersonal and regulation problems among ADHD children can put them at risk of severe parenting (Ford, 2002). Due to the high genetic inheritance of ADHD, it is likely that parents of children with ADHD might have ADHD symptoms themselves (Craig et al., 2020). Under challenging circumstances, these parents might resort to physical punishment due to their uncontrolled impulsivity (Williamson and Johnston, 2017). Exposure to physical punishment, which results in symptoms of post-traumatic stress disorder (PTSD), can exacerbate symptoms of ADHD, including inattention and hyperactivity. The relationship between maltreatment, such as physical punishment, and the emergence of ADHD symptoms requires further exploration (Craig et al., 2020; Szymanski et al., 2011).

In this study, it was not surprising that the mothers used physical punishment more often than the fathers. Generally, the mother initiates disciplinary action and hands the matter to the father after he comes home from work. The attitudes of the parents in both groups toward the use of physical punishment were roughly similar, with slightly more positive results in favor of the ADHD group. These fathers had suffered from the harmful effects of physical punishment and could not justify using it on their own children.

Our results support established recommendations on the assessment of ADHD. Namely, this assessment requires the evaluation of physical injuries and maltreatment from different sources. The findings in this study may help trainers in parental training programs for the parents of both ADHD and TD children to discuss the use of non-physical disciplinary methods and the prioritization of less harmful methods.

## Limitations

This study is the first of its kind in the Gulf Cooperation Council. However, it has some notable limitations. First, the sample size was small and did not allow for extensive analysis of the associated factors. Moreover, the participants used their memories to gather information, which hinders its accuracy. Lastly, the results would have been more informative if the questionnaire had included questions on the severity of physical punishment, the use of medication and its effects on the children's emotional stability.

## Conclusions

This study compared the parents of 50 children diagnosed with ADHD and the parents of an equal number of TD children regarding their use of physical punishment. The results revealed that the children of the ADHD group experienced more physical punishment from their mothers and fathers than the children of the TD group. The mothers in the TD group used physical punishment more frequently than the fathers. The physical punishment rate declined between generations. Furthermore, the groups had

roughly similar attitudes toward physical punishment. These findings support previous recommendations to evaluate the physical side of punishment and discourage its use during both clinical assessments and diagnoses of ADHD. Future research should investigate the relationships between parenting programs and the reduction of physical maltreatment among children in the general public and children with ADHD in particular.

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### **Author Contributions**

Al Ansari AMS – Conceiving, writing, and reviewing the manuscript.

Al Tourah AJH – Writing and reviewing the manuscript.

Al Mahmoud FK – Collecting and analyzing the data.

Suleiman N – Analyzing the data and reviewing the manuscript.

Jahrami H – Conceiving and reviewing the manuscript.

### **Ethical Approval**

The authors obtained ethical approval from a research committee secondary care (Ministry of Health).

### **Conflict of Interest**

The authors report no conflicts of interest.

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### **Annexes:**

#### **Physical Punishment Data Collection Form:**

School Health department, public health directorate is conducting a survey on the use of physical punishment as a way of influencing unwanted and non-desirable child behavior. kindly answer the following questions:

#### **Basic Data:**

Mother's age:

Work status:

Working                      Not working                      Retired                      Student Homemaker

Education:

primary                      secondary                      university Greater

Father's age:

Work status:

Working                      Not working                      Retired                      Student

Education:

primary                      secondary                      university                      Greater

The child's age:                      month                      year

#### **Physical punishment data:**

1. Do you hit your children?

If the answer is yes, answer questions from 2 - 4 and if the answer is no, go to question 5

Yes                      No

2. What do you use in punishment? (You can choose more than one answer)

The Hand      A Wooden Tool                      Headband                      A Metallic Tool  
                     The Hose    The Belt                      Other:

3. What is the purpose of the beating?

Discipline      To stop a certain behavior                      Extreme anger at a certain behavior

Other methods such as talking to him, giving advice, deprivation of something he likes are exhausted (Name them: \_\_\_\_\_ )

4. How many times a year do you hit your children?

Once    two                      three                      four                      five or more

5. Were you beaten as a child?

Yes                      No

If yes, who?

Father              mother              brother              sister              other family member

6. Who used to hit you the most when you were young?

Mother              Father              Others

7. Do you agree that physical punishment is one of the successful means in changing your child's behavior pattern?

Strongly agree                      I agree                      I agree somewhat

I disagree                      I strongly disagree

# استخدام العقاب الجسدي من قبل اباء وأمهات الأطفال ذوي نقص الانتباه وفرط الحركة والأطفال ذوي التطور العادي

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## المُستخلص

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الهدف: أنّ استخدام العقاب الجسدي من قبل أولياء الامور يختلف حسب المجتمعات. قد يبدي والدي أطفال نقص الانتباه وفرط الحركة باستخدام العقاب الجسدي بوتيرة أعلى مقارنة بغيرهم بسبب شيوع الاضطرابات السلوكية لدى أولادهم. هذه الدراسة تبحث استخدام العقاب الجسدي لدى والدي أطفال نقص الانتباه وفرط الحركة مقارنة بالوالدي الأطفال ذوي التطور الطبيعي.

الطريقة: اتبع منهج الدراسة الوصفية مع وجود عينة مقارنة المجموع الكلي (100) خمسون منهم من فئة نقص الانتباه وفرط الحركة مقسم بالتساوي للجنسين وهذا ينطبق على العينة المقارنة ايضاً. أعمار الأطفال كانت بين 7 و 17 سنة، كلا المجموعتين انضموا إلى الدراسة بطريقة العينة المقبولة.

النتائج: كلا المجموعتين تشابهوا في الصفات الديموغرافية، مجموعة نقص الانتباه وفرط الحركة استخدموا العقاب الجسدي بمعدل أكبر من العينة الضابطة (التطور العادي) من قبل كلا الأب والأم. في عينة التطور العادي كان استخدام العقاب الجسدي من قبل الأم ضعف معدل الاستخدام لدى الأب (40%، 20%). معدل استخدام العقاب الجسدي عن أطفال التطور الطبيعي (30%) كان اقل من الذي تعرض له أباءهم وأمهاتهم. كلا المجموعتين كانت آراؤهم ومواقفهم متشابهة إلى حد كبير حول استخدام العقاب الجسدي.

الاستنتاج: المختصين المعالجين لأطفال نقص الانتباه وفرط الحركة لديهم مسؤولية كبيرة في الاستقصاء عن وجود العقاب الجسدي والتعامل معه بمهنية للتقليل من آثاره الضارة.

مفاتيح الكلمات: اضطراب فرط الحركة ونقص الانتباه، البحرين، الأطفال، النمو الطبيعي، العقاب البدني.

