

# Prevalence and correlates of conduct disorder among inmates of juvenile detention centres, United Arab Emirates

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معدل انتشار الاضطرابات السلوكية وتراؤباتها في الساكنين لمراكز احتجاز الشباب في الإمارات العربية المتحدة

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**الخلاصة:** أجرى الباحثون تقيماً لمعدل انتشار الاضطرابات السلوكية لدى 77 شاباً في أربعة مراكز لاحتجاز الشباب في الإمارات العربية المتحدة. وقد بلغ معدل انتشار الاضطرابات السلوكية 24.7% كما، وجد أن الانتكاس الذي يُستدل عليه بتكرار الإدخال إلى مراكز الاحتجاز يترافق مع ذلك الاضطراب السلوكي. وتبين أن تشخيص الاضطرابات السلوكية يترافق مع مستوى مهني وتعليمي منخفض لدى الآباء مع العيش مع أحد الأبوين أو عند الأقرباء. ومن بين المواطنين في الإمارات العربية المتحدة، ارتبطت الاضطرابات السلوكية مع كون أمهاتهن لا يحملن الجنسية الإماراتية.

**ABSTRACT** The prevalence of conduct disorder was assessed in 77 young people in 4 juvenile detention centres in the United Arab Emirates (UAE). The prevalence of conduct disorder was 24.7%, and recidivism, as indicated by repeat admissions to the centres, was found to be associated with conduct disorder. Having a diagnosis of conduct disorder was associated with a lower educational and occupational level of the father, as well as living with a single parent or relatives. Among UAE nationals, conduct disorder was also associated with having a mother who was a non-UAE national.

## Prévalence et corrélats des troubles du comportement chez des détenus des centres pour jeunes délinquants aux Émirats arabes unis

**RÉSUMÉ** La prévalence des troubles du comportement a été évaluée chez 77 jeunes gens dans quatre centres de détention pour jeunes délinquants aux Émirats arabes unis. Elle était de 24,7 % et l'on a établi que la récidive, attestée par les incarcérations répétées dans les centres, était associée aux troubles du comportement. Le diagnostic de troubles du comportement était associé à un faible niveau d'instruction et à un faible niveau professionnel du père, ainsi qu'au fait de vivre avec un seul parent ou avec des membres de la parenté. Chez les ressortissants des Émirats arabes unis, les troubles du comportement étaient également associés au fait d'avoir une mère non ressortissante de ce pays.

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## Introduction

Conduct disorder is characterized by a persistent and repetitive pattern of behaviour in which the basic rights of others or major age appropriate social norms are violated [1]. It is estimated that around 6%–16% of boys and 2%–9% of girls have some degree of conduct disorder [2]. The problem is more common in children of parents with anti-social behaviour or alcohol dependence [3].

There has been extensive research on conduct disorder in the last 2 decades but few studies have been done in the setting of juvenile detention centres. Furthermore, most studies have focused on boys and there is little information on delinquent girls. A study carried out on Russian juvenile delinquents in the United States (US) found that 73.2% had a diagnosis of conduct disorder [4]. Another study in the US on 42 incarcerated juvenile males found that 30 had conduct disorder [5]. A study among juvenile delinquents in Brazil found that 77% had conduct disorder [6]. In a recent study in Turkey, of the 230 juvenile detainees, 80 (34.8%) were found to be substance abusers (excluding nicotine and alcohol) and the rate of conduct disorder was 46.3% in substance users and 25.3% among non-substance users [7].

Increasing number of young people are committing acts of violence worldwide, and several international studies are available on this growing problem of violent behaviour and juvenile delinquency [8]. However, these studies have been done in countries with a very different sociocultural background compared to the United Arab Emirates (UAE). Given the fact that attitudes, beliefs and value systems as well as society's tolerance of problem behaviours exhibited by youths vary from one culture to another, there is a need to study these is-

sues in each community. To date no studies have examined these issues in the UAE.

The present study was therefore carried out to determine the prevalence and psychosocial correlates of conduct disorder among boys and girls admitted to detention centres in the UAE. These centres receive young people up to 21 years of age who have committed crimes and are serving a sentence.

## Methods

We conducted a cross-sectional study of conduct disorder of inmates of juvenile detention centres in the UAE. There are 4 such centres: 1 in Abu Dhabi city, 1 in Dubai and 2 in Sharjah. The study sample was recruited from all these 4 centres. The centres in Abu Dhabi and Sharjah have 2 separate sections; 1 for males and another for females. The Dubai centre has only 1 male section, and the females stay in special wards in the central jail. All these centres provide educational, physical and spiritual services for the juvenile inmates.

Data were collected for a period of 1 month from August to September 2004, and all the consenting inmates of the 4 centres during this period formed the study sample.

All the subjects were evaluated using the Conduct Disorder Scale (CDS), which is a standardized instrument designed to assess juveniles with conduct disorder and other severe behavioural disorders [9]. The CDS provides norm-referenced information that can assist in the diagnosis of conduct disorder. Items on the CDS are based on the definitions and criteria of conduct disorder as per the *Diagnostic and statistical manual of mental disorders* [1]. The psychometric properties of CDS have been established in diverse sociocultural settings and it has been found to be reliable and valid. Furthermore,

concurrent criterion-related validity studies have demonstrated that scores from the CDS can be used to discriminate subjects who have conduct disorder from those who belong to different diagnostic groups [10].

The CDS was translated into classical Arabic, and back translation to English was done by another person who was not involved in the Arabic translation. A pilot study was performed with 10 young people and their teachers, and minor modifications were made in the wording based on their feedback. Data on various sociodemographic characteristics were obtained using a semi-structured questionnaire.

The study was approved by the ethics committee of our institution and informed consent was obtained from the study subjects. Data were analysed using *SPSS* program. The chi-squared test was used to assess statistical significance between categorical variables. A  $P$ -value  $< 0.05$  was considered the cut-off for statistical significance.

## Results

There were a total of 93 inmates during the study period in the 4 centres. Of these, 16 were excluded: 5 were illegal immigrants and 11 had not committed any crime but were temporarily placed at the centre for other reasons. All the remaining 77 subjects who were eligible to enter the study gave consent to participate and were hence included. Of these 77 subjects, 61 (79%) were from Abu Dhabi, 4 (5%) were from Dubai and 12 (16%) were from Sharjah. There were 72 boys and 5 girls in the age range 10 to 21 years.

The most common reason for admission was sexual crime (43%), followed by theft (38%), substance abuse (8%), civil offences (e.g. driving offences) (6%) and violence (5%). For the majority of subjects, it was

the first admission to a juvenile centre (56 subjects, 73%), while more than a quarter (21 subjects, 27%) had a prior admission.

Of the 77 subjects, 50 (65%) were living with both parents, while 20 (26%) came from single parent families, and the remaining were living with other relatives. Surprisingly, 88% of the subjects reported satisfaction with the level of care that they received from the family. However, 17% each reported that either the father or the mother, while present in the household, was uninvolved in their care during childhood.

The majority were UAE nationals (60%), while 23% were from other Arab countries and the remaining 17% were non-Arabs. The majority came from large families with only 10 subjects (13%) having fewer than 4 siblings. Polygamy (father having more than 1 wife) was noted in 26% of the families. As regards paternal education, 21% of the fathers had received a university education, 12% had attained secondary education, while the greatest proportion (37%) had received some schooling (grade 1 to 8), and 6% were illiterate. Only 51% of the fathers were employed.

When asked about religious habits, 23% reported praying always, 9% said that they never prayed, while the majority (68%) said that they prayed sometimes.

We found that 24.7% of the juvenile detainees had conduct disorder. Table 1 shows the prevalence and severity of conduct disorder.

The participants with conduct disorder had more admissions than those without conduct disorder ( $P = 0.001$ ) (Table 2). This association persisted even after controlling for age. Having conduct disorder was found to be significantly associated with living with a single parent or with relatives ( $P < 0.01$ ). Interestingly, it was also noted that the paternal educational level of those with conduct disorder was lower, with the

**Table 1 Prevalence and severity of conduct disorder among juvenile detainees**

Degree of conduct disorder	No.	%	Cumulative %
Severe	6	7.8	7.8
Moderate	6	7.8	15.6
Mild	7	9.1	24.7
No conduct disorder diagnosed	58	75.3	100.0
Total	77	100.0	

majority having received only a few years of schooling when compared to those without conduct disorder ( $P = 0.02$ ). Similarly conduct disorder was found to be associated with the father being unemployed at the time of the study ( $P = 0.046$ ). Among the UAE national subgroup, a significant association was noted between the presence of conduct disorder and the mother being a non-UAE national ( $P = 0.05$ ).

## Discussion

The prevalence of conduct disorder among the inmates of juvenile detention centres in the UAE was 24.7%. This rate is higher than the generally reported prevalence rate of 5% to 15% in the general population [2], and the rate of 7% for conduct disorder observed in a study in the UAE among primary health care attenders [11]. However, this rate is much lower than the 71% and 73% noted in the United States [4,5] and 77% in Brazil [6]. Rate of recidivism as indicated by repeat admission to the centres was associated with a diagnosis of conduct disorder, a finding also noted by other investigators [12]. Repeat admission was also found to be associated with living with only 1 parent or with relatives. This is in keeping with earlier studies that have suggested that intact family structures, prosocial peer groups and supportive communities serve as protective factors against violence in young people [8]. On a similar vein, the diagnosis

**Table 2 Factors significantly associated with having conduct disorder**

Variable	Conduct disorder				P-value
	Yes ( $n = 19$ )		No. ( $n = 58$ )		
	No.	%	No.	%	
<i>No. of admissions</i>					< 0.001
1	8	42	48	83	
>1	11	58	10	17	
<i>Living with:</i>					< 0.01
Both parents	12	63	40	69	
One parent or relatives	7	37	18	31	
<i>Paternal education</i>					0.02
Illiterate	4	21	8	14	
Primary	14	74	26	45	
Secondary	0	0	9	16	
University	1	5	15	26	
<i>Father's employment</i>					0.046
Employed	5	26	34	59	
Unemployed	14	74	24	41	

of conduct disorder was associated with a lower educational and occupational level of the father, perhaps indicating a deprived background. Furthermore, among UAE citizens, conduct disorder was associated with a non-UAE nationality of the mother. It may be that in these instances, the mother being from another country might seriously limit opportunities for community ties and support.

Earlier studies have suggested a significant association between conduct disorder and illicit drug and alcohol use [6, 7]. Knowledge about the high prevalence of conduct disorder in the delinquent group and the other associated factors should guide preventive strategies aimed at reducing delinquent behaviour and illicit drug use. Another co-morbid condition that needs attention in early childhood is attention deficit hyperactivity disorder (ADHD) since as many as 44% of children with ADHD were found to have co-morbid conduct disorder in a study in Tunisia [13].

Aggressive behaviours, non-compliance and rule-breaking are common during childhood and lead to psychopathology and use of mental health services in adulthood [14], and therefore priority should be given to cost-effective intervention programmes to tackle these problems. In this regard it has been shown that family and parenting interventions for juvenile delinquents have beneficial effects on reducing time spent in institutions and their criminal activity [15]. Research also suggests that interventions in early years from 0 to 8 years may be most effective in reducing conduct disorder before antisocial behaviour becomes crystallized [16]. Furthermore, it has been found that the economic cost of severe antisocial behaviour in children is substantial and that the economic benefit of evidence-based interventions is consider-

able [17]. Thus, based on the evidence from available international literature and the findings of this study, it would seem that the UAE community would benefit from such targeted interventions, particularly during early school years.

We found that the prevalence of conduct disorder among juvenile delinquents was 3 times higher than the rate in the UAE population. It is important to identify conduct disorder cases as early as possible in order to reduce crime among children and adolescents, and to prevent them from developing antisocial personality disorders and possible substance abuse in later life.

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## References

1. *Diagnostic and statistical manual of mental disorders*, 4th ed. Washington DC, American Psychiatric Association, 1994.
2. Lahey BB et al. DSM-IV field trials for oppositional defiant disorder and conduct disorder in children and adolescents. *American journal of psychiatry*, 1994, 151:1163-71.
3. Wasserman GA et al. Parenting predictors of early conduct problems in urban, high risk boys. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996, 35:1227-36.
4. Ruchkin V et al. Psychopathology and age at onset of conduct problems in juvenile delinquents. *Journal of clinical psychiatry*, 2003, 8:913-20.
5. Forehand R et al. Juvenile delinquency entry and persistence. *Journal of behaviour therapy and experimental psychiatry*, 1991, 22(4):261-4.
6. Andrade RC, Silva VA, Assumpcao, FB Jr. Preliminary data on the prevalence of psychiatric disorders in the Brazilian male and female juvenile delinquents. *Brazilian journal of medical and biological research*, 2004, 37:1155-60.
7. Copur M, Turkcan A, Erdogmus M. Substance abuse, conduct disorder and crime: assessment in a juvenile detention house in Istanbul, Turkey. *Psychiatry and clinical neuroscience*, 2005, 59(2):151-4.
8. Group for the Advancement of Psychiatry, Committee on Preventive Psychiatry. Violent behavior in children and youth: preventive intervention from a psychiatric perspective. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1999, 38(10):1208.
9. Gilliam JE, Scheuermann-Scott BK. The behaviorally disordered offender. In: Rutherford R, Nelson C, Wolford B, eds. *Special education in correctional education*. Columbus, Ohio, Merrill Publishing Co., 1987.
10. Kelley EJ, Van Vactor JC. Distinguishing between conduct problem and emotionally disturbed students in secondary school. *Psychological reports*, 1991, 69:303-11.
11. Eapen V et al. Child psychiatric disorders in a primary care Arab population. *International journal of psychiatry in medicine*, 2004, 34(1):51-60.
12. Pardini D, Obradovic J, Loeber R. Interpersonal callousness, hyperactivity/impulsivity, inattention, and conduct problems as precursors to delinquency persistence in boys: a comparison of three grade-based cohorts. *Journal of clinical child and adolescent psychology*, 2002, 35(10):46-59.
13. Bouden A, Denguezli I, Halayem MB. *The attention deficit/hyperactivity disorder in a Tunisian clinical population*. Paper presented at the 16th World Congress of the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP), 22-26 August, 2004, Berlin, Germany.
14. Rey JM, Sawyer MG, Prior MR. Similarities and differences between aggressive and delinquent children and adolescents in a national sample. *Australian and New Zealand journal of psychiatry*, 2005, 39:366-72.
15. Woolfenden SR, Williams K, Peat JK. Family and parenting interventions for conduct disorder and delinquency: a meta-analysis of randomized controlled trials. *Archives of disease in childhood*, 2002, 86(4):251-6.
16. Webster-Stratton C, Taylor T. Nipping early risk factors in the bud: preventing substance abuse, delinquency, and violence in adolescence through interventions targeted at young children (0-8 years). *Preventive science*, 2001, 2(3):165-92.
17. Romeo R, Knapp M, Scott S. Economic cost of severe antisocial behaviour in children - and who pays it. *British journal of psychiatry*, 2006, 188:547-53.