

# Associated Factors of Conduct Disorder among School Students

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**Abstract Background:** Conduct disorder is a common childhood psychiatric problem that has an increased incidence in adolescence. It is defined as a pattern of repetitive behavior where the basic right of others or social norms or rules is violated. CD increases the risk of several public health problems (violence, weapon use, teenage pregnancy, substance abuse and dropping out of school). During reviewing the literature in this subject, the researcher found only one local study conducted in KSA among Bahrah secondary school students in 2008 and the prevalence was 66.8%. **Objectives:** Evaluate the associated factors of conduct disorder among male secondary school students in Al-Aziziah, Makkah, 2009. **Methods:** A cross-sectional study including a random sample of male secondary school students in Aziziah, Makkah. Data collected through a questionnaire consisting of two parts: the first part containing demographic data and the second part containing conduct disorder rating scale based on DSM-IV criteria. Those who had 3 or more positive items were defined as having conduct disorder. **Results:** Conduct disorder increased with advancing student age. The cause of the father absenteeism was the important factor that affects the changes in the prevalence of conduct disorders in the sons of the dead fathers who were lower compared to those whom fathers were absent for other causes as frequent absenteeism, polygamy or separation from the mothers. **Conclusions:** The conduct disorder among male secondary school students in Aziziah, Makkah is associated with significant negative consequences that could alter the quality of life. Conduct disorders present a significant public health problem for both the individual and the economy.

**Keywords:** associated, factor, disorder, school, students

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## 1. Introduction

Conduct disorder is a common childhood psychiatric problem that has an increased incidence in adolescence. [1] It is defined as a pattern of repetitive behavior where the basic right of others or social norms or rules is violated. [2] The prevalence of conduct disorder in juvenile detention centers among boys was 24.7% in UAE [4] and 52.8 % in UK [5]. In USA, the estimated CD prevalence was 12% [6] Conduct disorder has high comorbidity, about 40% of untreated childhood-onset CD will develop

into adult APD [1] and 60% will develop one or more mental health or learning disorders [7].

## 2. Literature Review

In Asia, the researcher found two studies, one was conducted in the UAE on 77 young in 4 juvenile detention centers and the prevalence was 24.7% and it was associated with lower educational and occupational level of the father. [4] The second study was conducted in 2005 in Taiwan on 1070 students for 3 years and the prevalence of CD was 2.5 in the first year and 2.9 in both third and

fourth years. [9] Worldwide, one study was conducted in USA in 2006 with nationally representative sample of respondents and the prevalence was 9.5% (male=12%, female=7.1%). [6] In Colombia, the prevalence of probable conduct disorder in 190 secondary school students in 2001 was 13.7% and the prevalence of conduct disorder was 8.4% without significant differences between socioeconomic strata. [10]

## 2.1. Aim

To evaluate associated factors of conduct disorder among male students in secondary schools in the Al-Aziziah, Makkah, 2009.

## 2.2. Objectives

To identify the associated factors with conduct disorder among school students in Al-Aziziah, Makkah, 2009.

## 3. Methodology

**1- Study design:** A cross-sectional study

**2- Study place:** Makkah is located in the western region of KSA.

**3- Study population:** Male students in the secondary schools in Al-Aziziah  $\leq$  18 years.

**4- Sampling:** The total number of students in the five schools was 2261.

The sample size was calculated by using Epi info version 6, it was 226 students.

**5- Sampling technique:**

The sample size was distributed among the five schools and determined as a percentage proportionally related to the total number of the student in each school.

**6- Data collection:**

**Tools:** A questionnaire consisting of two parts:

1-The first part containing demographic data (age, address, parental status, history of maternal smoking, family history of psychiatric illness, peer group and school counselor)

2- The second part containing the conduct disorder rating scale based on DSM-IV criteria. Those who had 3 or more positive items were defined as having conduct disorder.

**Technique:** Self-administered questionnaire.

**8- Ethical considerations:**

Approval of JPFCM was obtained.

The permission of the education director was obtained.

All collected data were kept confidential.

**9- Budget:**

self- funded.

**10- Data Entry and statistical Analysis**

Statistical Package for Social Sciences (SPSS) software version 16.0.

## 4. Results

Conduct disorder and its association with personal characteristics of the participants.

### 4.1. Student's Age

From Table 1, it is that the prevalence of conduct disorder increased with advancing in age. It was higher among students aged 17-18 years (41.9%) than among those aged 15-16 years (25.6%). This difference was statistically significant ( $P < 0.05$ ).

**Table 1. Prevalence of conduct disorders among the students according to their age and residence**

Student's age and residence		Presence of conduct disorders		p-value*
		Yes No. (%)	No No. (%)	
Student's age in years	15 - 16 (n=78)	20 (25.6)	58 (74.4)	0.016
	17 - 18 (n=148)	62 (41.9)	86 (58.1)	
Residence	Aziziah (n=120)	35 (29.2)	85 (70.8)	0.018
	Others (n=106)	47 (44.3)	59 (55.7)	

\*Based on Chi-Square.

### 4.2. Residence

As displayed in Table 1, the prevalence of CD was significantly higher ( $P < 0.05$ ) among students who reside in areas other than Aziziah (44.3%) than those reside in different areas of Aziziah (29.2%).

### 4.3. Father's Characteristics

Table 2 illustrates the differences in the prevalence rate of conduct disorders among the students according to the characteristics of their fathers. It shows that the presence of the father per se was not associated with any remarkable changes in the prevalence of conduct disorders among their sons ( $P > 0.603$ ). Nevertheless, the cause of absenteeism was the important factor that affect the changes in the prevalence of conduct disorders as it was evident that the sons of the fathers who were absent because of death reported lower prevalence of CD as compared to those whom fathers were absent for other causes as frequent absenteeism, polygamy or separation from the mothers (12.5% versus 66.7%).  $P = 0.036$ . This difference was statistically significant ( $p < 0.05$ ). Father's age and educational level were not statistically significant factors for the change in the prevalence rate of conduct disorder among studied secondary school students ( $P > 0.05$ ).

### 4.4. Mother's Characteristics

Table 3 shows that the prevalence of conduct disorder was slightly higher among students whose mothers were absent (40.0%) as compared to those students whose mothers were present (36.0%), however, this difference was not statistically significant ( $p > 0.05$ ). Regarding the cause of absenteeism of the mothers, the prevalence of conduct disorder was higher among students whose mothers were employed (75.0%) as compared to those students whose mothers were either died (25.0%) or divorced (28.6%). present (36.0%), However, the difference was not statistically significant ( $P = 0.247$ ). Meanwhile, it was observed that the prevalence of conduct disorder was not a statistically significant difference between students of various levels of mother's education ( $p > 0.05$ ).

**Table 2. Prevalence of conduct disorders among the students according to the characteristics of their fathers**

Characteristics of the fathers		Presence of conduct disorders		p-value*
		Yes No. (%)	No No. (%)	
Presence of the father	Present (n=212)	77 (36.3)	135(63.7)	0.603
	Absent (n=14)	5 (35.7)	9 (64.3)	
Causes of absenteeism	Death (n=8)	1 (12.5)	7 (87.5)	0.036
	Others (n=6)***	4 (66.7)	2 (33.3)	
Father's age**	<40 years (n=9)	4 (44.4)	5 (55.6)	0.358
	41-50 years (n=122)	49 (40.2)	73 (59.8)	
	51-60 years (n=61)	17 (27.9)	44 (72.1)	
	>60years (n=26)	11 (42.3)	15 (57.7)	
Father's educational level	Not educated (n=3)	0 (0.0)	3 (100.0)	0.294
	Primary (n=14)	8 (57.1)	6 (42.9)	
	Preparatory (n=30)	9 (30.0)	21 (70.0)	
	Secondary (n=42)	16 (38.1)	26 (61.9)	
	University (n=137)	49 (35.8)	88 (64.2)	

\*Based on Chi-Square

\*\* 8 fathers died (excluded from father's age)

\*\*\* Frequent absenteeism, Polygamy or separation from the mother.

**Table 3. Prevalence of conduct disorders among the students according to the characteristics of their mothers**

Characteristics of the mothers		Presence of conduct disorders		p-value*
		Yes No. (%)	No No. (%)	
Presence of the mother	Present (n=211)	76 (36.0)	135 (64.0)	0.478
	Absent (n=15)	6 (40.0)	9 (60.0)	
Causes of absenteeism	Death (n=4)	1 (25.0)	3 (75.0)	0.247
	employed (n=4)	3 (75.0)	1 (25.0)	
	Divorced (n=7)	2 (28.6)	5 (71.4)	
Mother's educational level	Not educated (n=20)	9 (45.0)	11 (55.0)	0.079
	Primary (n=24)	14 (58.3)	10 (41.7)	
	Preparatory (n=31)	13 (41.9)	18 (58.1)	
	Secondary (n=58)	18 (31.0)	40 (69.0)	
	University (n=93)	28 (30.1)	65 (69.9)	

\*Based on Chi-Square.

**Table 4. Potential risk factors for conduct disorder**

Potential risk factors	Conduct disorder		(P-value)
	Yes N=75 No. (%)	NO N=134 No. (%)	
<b>Presence of psychic disorders among one or more of the family members:</b> Yes (17) NO (209)	7 (41.2) 75 (35.9)	10 (58.8) 134 (64.1)	(0.423)
<b>Presence of ex-smokers among one or more of the family members:</b> Yes (84) NO (142)	34 (40.5) 48 (33.8)	50 (59.5) 94 (66.2)	(0.193)
<b>Exposure to violence in the last years:</b> Yes (63) NO (163)	37 (58.7) 45 (27.6)	26 (41.3) 118 (72.4)	<001
<b>Is there one ore more of the companions behave violently?</b> Yes (80) NO (146)	50 (62.5) 32 (21.9)	30 (37.5) 114 (78.1)	<0.001
<b>Experiencing difficulties that needed interference from school counselor *</b> Yes (35) No (188)	20 (57.1) 61 (32.4)	15 (42.9) 127 (67.6)	0.005

\* Three students claimed that school counselors not present.

**5- Potential risk factors for conduct disorder**

Table 4 displays some potential risk factors for conduct disorder. Among 17 students claimed the presence of psychic disorders among one or more of their family members, 7 students (41.2%) had conduct disorder as compared to 35.9% among those with no history of presence of psychic disorders among one or more of their family members. However, the difference was not statistically significant. Similarly, Presence of ex-smokers among one or more of the family members was not associated significantly with conduct disorder. On the other hand, more than half of students exposed to violence in the last year (58.7%) had conduct disorder as compared to 27.6% among those not exposed to violence in the last year. The difference was statistically significant ( $P > 0.001$ ). Figure 1 illustrates that among those exposed to violence in the last year, 41.3% claimed that home was the place for this violence while 23.8% claimed that school was the place for the violence. Similarly, existence of one or more of the companions behave violently was associated significantly with conduct disorder among participated students as 62.5% and 21.9% of students with and without violent companions had conduct disorder respectively. The difference was statistically significant ( $P < 0.001$ ). Students experienced difficulties that needed interference from school counselors are more exposed to conduct

disorder than those without this experience. More than half of students experienced difficulties that needed interference from school counselors (57.1%) had conduct disorder as opposed to 32.4% of those not experienced difficulties that needed interference from school counselors. The difference was statistically significant ( $P = 0.005$ ).

**6- Negative consequences of conduct disorder among participants.**

It is evident from the Table 5, that there were statistically significantly higher negative consequences among students with conduct disorder as compared to those without. Approximately one-third of students with conduct disorder (34.1%) had significant problems with friends as compared to only 6.9% reported among those who had not conduct disorder. Similarly, 39.0% of students with conduct disorder reported affected relations with adults as compared to only 4.2% reported among those who had not conduct disorder. Approximately, 43.9% of those who had conduct disorder reported that their social relations were disturbed as well as their grades were affected as compared to only 6.3% of those who had not conduct disorder. Meanwhile, it was found that 39.0% of those who had conduct disorder were affected negatively in their academic performance as opposed to 5.6% of those who had not conduct disorder.

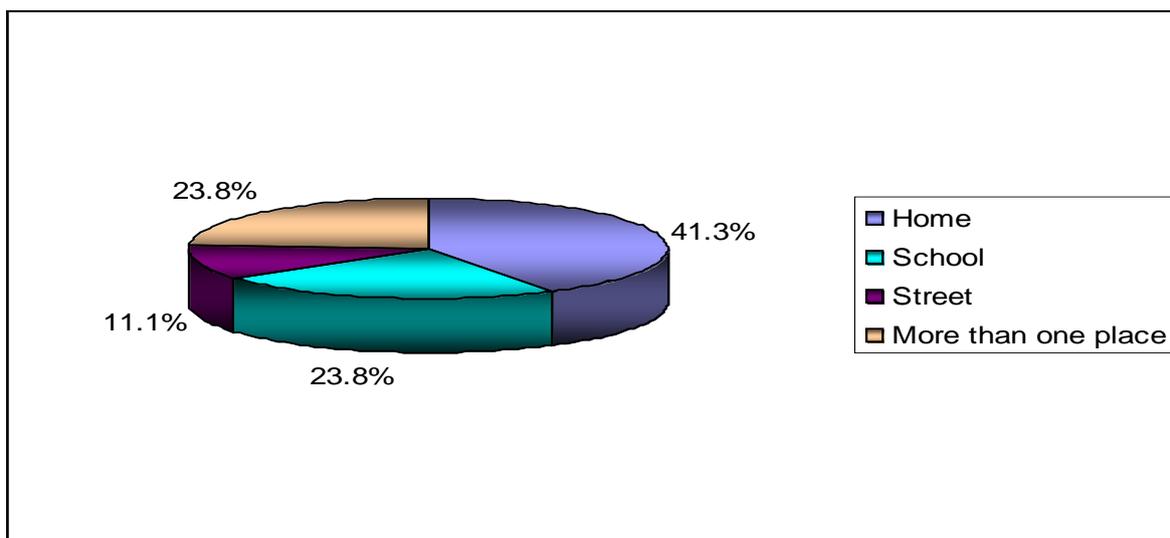


Figure 1. Distribution of students exposed to violence according to the places at which they were exposed to violence

Table 5. Negative consequences of conduct disorder on participating secondary school students

Negative consequences		Presence of conduct disorders		p*
		Yes No. (%)	NO No. (%)	
Significant problems with friends	Yes	28 (34.1)	10 (6.9)	<0.001
	No	54 (65.9)	134 (93.1)	
Affected relation with adults	Yes	32 (39.0)	6 (4.2)	<0.001
	No	50 (61.0)	138 (95.8)	
Affected other social relations	Yes	36 (43.9)	9 (6.3)	<0.001
	No	46 (56.1)	135 (93.7)	
Affected academic performance	Yes	32 (39.0)	8 (5.6)	<0.001
	No	50 (61.0)	136 (94.4)	
Affected grades of the student	Yes	36 (43.9)	9 (6.3)	<0.001
	No	46 (56.1)	135 (93.7)	

## 5. Discussion

These substantial differences observed in the prevalence of conduct disorder could be attributed to many reasons, first is the differences in the socio-economic characteristics of the different communities worldwide, second is the differences in the study groups, and third is the differences in the tools used for different studies.

The current study showed that although the absenteeism of the father per se was not significantly associated with the prevalence of conduct disorder nevertheless, the cause of absenteeism was the important factor that affects the changes in the percentage of conduct disorders. It was found that the disrupted family by polygamy or separation from the mothers had a significant impact on the percentage of conduct disorder being higher among students with disrupted parents relationship. The relationship between conduct disorder among boys and social problems of the fathers had been discussed in a study conducted in Germany and it was found that the fathers of boys with conduct disorder exhibited an abnormal psychophysiological response pattern similar to that of their sons, that might describe the background of the familial problem which led to separation and absenteeism of the father from the family. In USA, it was found that individuals with early-emerging conduct problems are likely to become parents who expose their children to considerable adversity, those parents who had a history of conduct disorder were specifically at elevated risk for socioeconomic disadvantage and relationship

## 6. Conclusion

Conduct disorders present a significant public health problem for both the individual and the economy. To reduce the frequency of conduct disorders, the first step is to recognize the risk factors for them. These may, in turn, suggest the causes of conduct disorders and help to identify the children most likely to develop them. Risk factors for the development of conduct disorders may be considered in terms of child, parenting and environmental factors.

## 7. Recommendations

1- Educate the community about conduct disorder, associated morbidity (e.g. substance abuse, risky sexual behavior), comorbidity (e.g. anxiety, depression), and future consequences (e.g. antisocial personality disorder).

2- parent-training programs should be started that have been proven to be very effective for young children (under 10 years) with conduct disorders.

3- Emphasize the role of school counselors in early detection and recognition of any abnormal behavior and notification.

4- Arrange for lectures, meeting, to emphasize the role of family physician in conduct disorder through assessing severity, referral, identification and treatment of comorbidity, and clarification of the long-term

prognosis without intervention to the school counselor and caregivers.

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