

# Prevalence of child abuse and its association with depression among first year students of Kuwait University: a cross-sectional study

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## Abstract

**Background:** Child maltreatment occurs across all cultures and societies. Research in Kuwait is necessary to document its prevalence and related factors.

**Aims:** To determine the prevalence of childhood abuse reported by first year students of Kuwait University in 2010 and its association with depression.

**Methods:** A random sample of first year undergraduates completed the Arabic version of the ISPCAN Child Abuse Screening Tools for young adults and were assessed for depression using the Patient Health Questionnaire (PHQ-9).

**Results:** Among 2508 respondents (70.9% female), 35.6%, 53.5% and 19.8% experienced at least one form of physical, emotional and sexual abuse, respectively. Physical abuse was more prevalent among boys ( $P < 0.001$ ). For emotional and sexual abuse, sex differences were not statistically significant. Physical abuse was associated with living with the father, emotional abuse with living with the mother and sexual abuse with living with non-parents ( $P < 0.001$ ). Most perpetrators were non-parents. Abuse was more prevalent among students whose parents were separated/divorced, whose fathers were polygamous and where monthly family income was  $< \text{US\$ } 1800$ . Depression was significantly associated with all types of abuse and in multiple regression indicated it was one of the most important predictors of physical and sexual abuse.

**Conclusion:** Kuwaiti first year undergraduates commonly reported experiencing abuse. There is a strong need for child protection policies, improved legislation and prevention strategies.

Keywords: child abuse, maltreatment, depression, students, Kuwait

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## Introduction

### Background

Child maltreatment affects children worldwide and costs countries up to US\$ 94 billion annually (1,2). In developed countries, overall prevalence is 2.3–16.0% (3,4). In a study involving 4 European countries, the prevalence of physical, emotional and sexual abuse was 5%, 25% and 4%, respectively (5). In the United States of America (USA), 28.4% and 4.5% of a national cohort of young adults reported having been physically or sexually abused, respectively (3). Rates among young adults in the United Kingdom were 25%, 6% and 16% for physical, emotional and sexual abuse, respectively (4). In Arab countries, overall prevalence is largely unknown as population-based studies are lacking (6). One national study done in Saudi Arabia in 2010–2011 found that prevalence among adolescents was 57.5%, 74.9% and 14.0% for physical, emotional and sexual abuse, respectively (7). Child abuse is strongly associated with depression, suggesting it may also contribute to a country's mental health burden (1,2,8).

Around one-third of Kuwait's inhabitants are children (9). Kuwait signed the United Nations Convention on the

Rights of the Child in 1990 and passed a children's rights law in 2015 (10). However, few studies on child abuse in Kuwait exist. One national study found a prevalence of 15.0–18.0% for emotional, 3.4–5.8% for physical and 8.6–17.4% for sexual abuse (6). This is compounded by cultural acceptance of using physical punishment to discipline children (11).

### Objectives

This research aims to determine the prevalence of physical, emotional and sexual abuse among first year university students in Kuwait; the association of abuse with sex, age, demographic characteristics, smoking, violent behaviour and criminal record; the co-occurrence of abuse types; the association between child abuse and depression; and the most important predictors of abuse.

It is hypothesized that physical, emotional and sexual abuse are present in Kuwait; that abuse is more common in households where parents are uneducated, unemployed, separated/divorced or polygamous; that physical abuse is more common in boys and emotional and sexual abuse are more common in girls; that exposure to one kind of abuse is associated with co-occurrence of other

types; and that exposure to child abuse is associated with depression. It is also hypothesized that perpetrators are mainly parents and that the most important predictors of abuse are a discordant parental marital relationship and low family income.

## Methods

### Participants and setting

Among Kuwait University's students (89.4% Kuwaiti), first year students were selected because their age made them better able to remember childhood incidents of abuse and allowed them to consent to our survey without parental permission. According to the schedules from the Dean of Admissions and Registration, the only common mandatory class required for all freshmen was English Language. This was selected in each faculty as the setting for questionnaire distribution. Participants were freshmen attending these classes.

The estimated sample size was calculated using prevalence from previous research in Kuwait (6). Based on a prevalence rate of 3.4% for physical abuse, 95% power, alpha error of 0.05, and precision,  $d$ , of 0.02 [as recommended when prevalence is < 10% (12)], the minimum sample size estimate was 2320.

### Procedure

The research protocol was approved by the ethics committee of the Faculty of Medicine in Kuwait University and permission was granted from the head of each faculty. Volunteers who helped with survey distribution were instructed on the content of the questionnaire, consent forms, and how to aid participants seeking help for a previous abusive experience. Questionnaires were distributed over one week in December 2010 at the beginning of class, with prior permission from class instructors, and participants were given sufficient time to complete the self-reported survey. Written informed consent was obtained from all students.

### Instruments

The survey included Arabic versions of the ISPCAN Child Abuse Screening Tools Retrospective (ICAST-R) and Patient Health Questionnaire (PHQ-9), 2 validated tools that detect child abuse and severity of depression (1,13,14). Sociodemographic information that was collected included sex, age, marital and smoking status, living conditions, family income and parental marital status, education and occupation. Students were asked about any recent involvement in physical fights and police arrests to evaluate violent and criminal behaviour.

The ICAST-R and PHQ-9 were translated into Arabic, back-translated to English, and compared with the available Arabic versions to ensure equivalence of meaning (15). Test-retest reliability for the ICAST-R was assessed by asking 55 second year students at the Faculty of Medicine to complete the questionnaire and repeating it one week later. Kappa statistics were used to measure intra-observer variation. For physical abuse items, apart

from Question 22 (hit or punched at age 10–13), where the kappa value was 0.299, the kappa values for other items indicated moderate to substantial agreement (0.41–0.80) (16). The same agreement level was found for most emotional abuse items. For most sexual abuse items, the agreement was substantial (0.61–0.80).

### Pilot testing and modification of the questionnaire

A pilot study done one month before the study included 29 students from the Faculty of Medicine (not included in the main study). The average time to complete the questionnaire was 9 minutes. Based on students' feedback about the survey, a few changes were made to the ICAST-R. "Faculty" was added in the demographic section. "Governorate" (as the administrative unit) replaced "City" as the latter is not applicable to a small country like Kuwait. The list of abuse perpetrators was regarded as too lengthy and was summarized into 3 categories (mother, father, others). Most students preferred yes/no answers, which led to the addition of "Yes", "No" and "Not applicable" responses to the questions.

### Data analysis

We used SPSS, version 22 for Windows, to analyse the data. Frequency counts were used to clean the data, examine the normality of data distribution and calculate prevalence rates. Univariate analysis was used to test significant differences between groups. Multivariate analysis was used to assess independent predictors of dependent variables and the variance contributed by the predictors in the multivariate context, after adjusting for covariates. On examination of the frequency tables, we found that missing data were random events. For univariate analyses, missing data were handled by eliminating the subject from the respective analysis. For multivariate analyses, missing data were handled by list-wise deletion. The level of significance was set a  $P < 0.05$ , however, where there was multiple testing, a Bonferroni correction of  $P < 0.01$  was used to avoid Type I errors.

## Results

### Demographics

Out of 2523 students who were sampled, 2508 participated and 15 refused, giving a response rate of 99.4%. Most students were female (70.9%) and 97.9% were aged 16–24 years. Kuwaiti students comprised 92.8%. Most students were single (93.5%) and 87.3% came from families where the parents were married. The sample included students from the Capital (22.4%), Hawalli (17.6%), Farwaniya (19.6%), Ahmadi (14.2%), Mubarak Al-Kabir (14.8%) and Jahra (11.3%) governorates.

### Physical abuse

Among the participants, 35.6% ( $n = 818$ ) were exposed to at least one form of physical abuse before age 18 years. Of these, 61.4% were hit/punched, 29.8% were kicked, 41.8% were beaten with an object (stick, whip, belt), 23.2% were

shaken and 22.5% were stabbed/cut with a knife or sharp object. Regarding perpetrators, 26.8% said it was someone other than the parents, 8.9% said it was the mother and 10.5% said it was the father.

Table 1 shows the significant associations of physical abuse, beyond the Bonferroni correction level of  $P < 0.01$ . Physically abused students were significantly more likely to be male (49.8% males vs 29.8% females), be between 25–34 years, study at the faculty of allied health, have divorced parents, live with their father, have an uneducated father, have a polygamous father, have a family monthly income < US\$ 1800, smoke cigarettes, believe the abuse was frequent and unjustified, and be involved in violent behaviour and altercation with the police. They were also more likely to report multiple forms of physical abuse.

### Emotional abuse

Prevalence of at least one form of emotional abuse before age 18 years was 53.5% ( $n = 1244$ ). Of these, 84.2% were insulted or criticized to the point of feeling bad, stupid or worthless; 30.5% were told they were unloved; 27.6% wished they were dead or never born; 30.5% were threatened with being hurt/killed; and 13.6% were threatened with being abandoned. Regarding the perpetrators, 45.5% said it was someone other than the parents, 19.7% accused the mother and 15.4% accused the father.

There were no statistically significant age or sex differences in the prevalence of emotional abuse (Table 2), but exposure to multiple forms of abuse was slightly greater in males. Emotional abuse was significantly associated with parental divorce, living with the mother, having a polygamous family, studying

**Table 1 Association of indices of physical abuse with sociodemographic and psychosocial variables**

Sociodemographic variable	Significantly different groups	Total with abuse No. (%) <sup>a</sup>	$\chi^2$	df
Sex (ever abused)	Male > female	318 (49.8 male)	79.5***	1
Sex multiple abuses <sup>b</sup>	Male > female	167 (26.1 male)	96.9***	5
Age group (ever abused)	25–34 years > others	19 (65.5)	12.2**	2
Age group multiple abuses <sup>b</sup>	25–34 years > others	16 (55.1)	58.4***	10
Faculty (ever abused)	Allied health > others	47 (43.9)	38.4***	10
Parent's marital status (ever abused)	Divorced/separated > others	78 (53.1)	22.7***	2
Parents' marital status multiple abuses <sup>b</sup>	Divorced/separated > others	50 (34.0)	57.9***	10
Living with who (ever abused)	With father > others	15 (51.7)	17.5***	3
Living with who multiple abuses <sup>b</sup>	With father > others > both parents	11 (37.9)	50.0***	15
Father's education (ever abused)	Primary education > others	28 (45.2)	17.5**	5
Polygamy (ever abused)	Polygamous > Monogamous	74 (40.7)	14.5***	2
Polygamy multiple abuses <sup>b</sup>	Polygamous > Monogamous	42 (23.0)	29.0***	10
Household multiple abuses <sup>b</sup>	Multiple wives in same household > others	112 (32.2)	37.6***	10
Monthly income (ever abused)	Income less than US\$ 1800 > others	80 (53.7)	42.8***	4
Monthly income multiple abuses <sup>b</sup>	Income less than US\$ 1800 > others	47 (31.6)	67.9***	20
Smoking status (ever abused)	Ex-smoker > others	22 (66.7)	67.9***	3
Smoking status multiple abuses <sup>b</sup>	Daily smoker > Non-smoker	45 (44.2)	138.5***	15
Violent behaviour multiple abuses <sup>b</sup>	Physical fight last year > No physical fight	127 (50.4)	316.0***	5
Police arrest multiple abuses <sup>b</sup>	Arrested by police > not arrested	63 (34.5)	88.2***	5
Physical abuse justified (ever abused)	Not for discipline/not reasonable or justified > others	62 (88.6)	324.2***	3
Physical abuse justified multiple abuses <sup>b</sup>	Not for discipline/not reasonable or justified > others	43 (61.4)	467.2***	15
Physically hurt compared with other children (ever abused)	Much more than other children > others	40 (83.3)	283.6***	4
Physically hurt compared with other children multiple abuses <sup>b</sup>	Much more than other children > others	33 (68.9)	462.3***	20

<sup>a</sup>% of significant group. Because of missing responses, the overall total as denominator is less than the original total number.

<sup>b</sup>Multiple abuses:  $\geq 2$  forms of abuse.

\*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

df = degrees of freedom.

**Table 2 Association of indices of emotional abuse with sociodemographic and psychosocial variables**

Sociodemographic characteristic	Significantly different groups	Total with abuse No. (%) <sup>a</sup>	$\chi^2$	df
Sex multiple abuses <sup>b</sup>	Male > female	179 (28.0 male)	15.8**	5
Faculty (ever abused)	Allied health > others	77 (70.6)	31.3***	10
Parents' marital status (ever abused)	Separated/divorced > others	106 (67.1)	13.5***	2
Parents' marital status multiple abuses <sup>b</sup>	Separated/divorced > others	74 (46.9)	88.5***	10
Living with (ever abused)	With mother > others	142 (68.6)	22.9***	3
Living with multiple abuses <sup>b</sup>	With mother > others	96 (46.4)	87.4***	15
Polygamy (ever abused)	Polygamous > monogamous	111 (59.0)	19.7***	2
Polygamy multiple abuses multiple abuses <sup>b</sup>	Polygamous > monogamous	60 (31.9)	58.8***	10
Household multiple abuses <sup>b</sup>	Multiple wives not in same household > others	78 (33.2)	33.2***	10
Monthly income (ever abused)	Income less than US\$ 1800 > others	103 (66.5)	37.5***	4
Monthly income multiple abuses <sup>b</sup>	Income less than US\$ 1800 > others	67 (43.2)	87.7***	20
Smoking status (ever abused)	Daily smoker > others	71 (67.0)	15.4***	3
Smoking status multiple abuses <sup>b</sup>	Daily smoker > nonsmoker	96 (39.7)	32.3**	15
Physical fights multiple abuses <sup>b</sup>	Physical fight last year > no physical fight	125 (49.0)	128.1***	5
Emotional abuse experience (ever abused)	Not for discipline/not reasonable or justified > others	116 (97.5)	456.1***	3
Emotional abuse justified multiple abuses <sup>b</sup>	Not for discipline/not reasonable or justified > others	95 (79.9)	840.1***	15
Emotionally abused compared with other children (ever abused)	Much more than other children > others	64 (97.0)	271.7***	4
Emotionally hurt compared with other children multiple abuses <sup>b</sup>	Much more than other children > others	56 (84.9)	662.6***	20

<sup>a</sup>% of significant group. Because of missing responses, the overall total as denominator is less than the original total number.

<sup>b</sup>Multiple abuses ( $\geq 2$  forms of abuse).

\*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

df = degrees of freedom.

at the faculty of allied health, having a family income < US\$ 1800, smoking cigarettes, believing the abuse was unjustified, feeling more emotionally abused than other children and exhibiting violent behaviour.

### Sexual abuse

Prevalence of at least one form of sexual abuse before age 18 years was 19.8% ( $n = 457$ ). Of these students, 61.7% were exposed to someone's genitals, 14.2% were made to pose naked in front of a camera/video/webcam, 68.9% had someone forcibly touch their genitals, 37.2% were forced to touch someone else's genitals and 14.7% were forced to have sex. Only 36.8% of those abused notified someone, with 16.0% telling their mother, 3.4% telling their father and 28.0% telling a non-parent other. However, 18.8% waited at least one year before doing so. Upon revelation, 20.9% were believed and helped while 15.2% were not believed, were blamed, or not supported. Regarding the perpetrators, 17.7% accused someone other than the parents, 1.1% accused the mother and 1.1% accused the father.

There were no significant age or sex differences for sexual abuse (Table 3). Sexual abuse was significantly associated with parental divorce, polygamy, family income < US\$ 1800, studying at the Women's College, living with non-parents, cigarette smoking, involvement in physical fights and police arrest.

### Multiple types of abuse

Subjects exposed to more than one form of physical abuse were statistically significantly more likely to experience 2 or more forms of emotional abuse compared with those who were not physically abused (Table 4). They were also more likely to experience 2 or more sexual abuse forms compared with those who were never physically abused. Students who experienced more than one form of emotional abuse were significantly more likely to experience 2 or more forms of sexual abuse. In addition, those who experienced 2 or more forms of physical abuse by their mother were significantly more likely to experience multiple abuses by their fathers compared with those who were not physically abused by their mother.

### Association of abuse with depressive symptoms

All 3 types of abuse were associated with depression. Depression scores increased with increased exposure to multiple forms of abuse. A significant correlation was evident between total physical abuse scores and PHQ-9 scores ( $r = 0.301$ ,  $P < 0.001$ ). Positive correlations were also found between total emotional abuse and PHQ-9 scores ( $r = 0.448$ ,  $P < 0.001$ ) and between total sexual abuse and PHQ-9 scores ( $r = 0.264$ ,  $P < 0.001$ ). Prevalence of depression in our sample was 76.6%, with 55.6% of students reporting mild or moderate depression.

**Table 3 Association of indices of sexual abuse with sociodemographic and psychosocial variables**

Sociodemographic variable	Significant different groups	Total with abuse No. (%) <sup>a</sup>	$\chi^2$	df
Faculty <sup>b</sup>	Women's college > others	7 (20.5)	78.1**	50
Parents' marital status (ever abused)	Separated/divorced > others	53 (33.1)	20.9***	2
Parents' marital status <sup>b</sup>	Separated/divorced > others	68 (20.0)	31.7***	10
Living with who (ever abused)	Living with non-parent other > others > both parents	32 (34.8)	25.5***	3
Living with who <sup>b</sup>	Living with non-parent other > others > both parents	15 (16.3)	41.3***	15
Mother's education (ever abused)	Secondary education > others	77 (24.8)	17.3**	5
Polygamy (ever abused)	Polygamous > monogamous	38 (20.2)	12.6**	2
Polygamy <sup>b</sup>	Polygamous > monogamous	19 (10.1)	23.7**	10
Monthly income (ever abused)	Income less than US\$ 1800 > others	52 (34.0)	29.5***	4
Monthly income <sup>b</sup>	Income less than US\$ 1800 > others	27 (17.6)	49.4***	20
Smoking status <sup>v</sup>	Daily smoker > non-smoker	11 (11.0)	59.2***	15
Physical fights <sup>b</sup>	Physical fight last year > no physical fight	43 (17.4)	32.6***	5
Police arrest <sup>b</sup>	Arrested by police > not arrested	28 (16.1)	27.1***	5

<sup>a</sup>% of significant group. Because of missing responses, the overall total as denominator is less than the original total number.

<sup>b</sup>Multiple abuses (≥ 2 forms of abuse).

\*\*P < 0.01, \*\*\* P < 0.001.

df = degrees of freedom.

### Multiple regression analyses: predictors of abuse

Considering the significant univariate associations of child abuse as highlighted above, multiple regression analysis was used to determine the contribution of each factor in a multivariate context (Table 5). Of the factors that were significantly associated with physical abuse in the univariate analyses, the most important predictor of total physical abuse was recent involvement in a physical fight, accounting for 14.4% of total variance, followed by the depression (PHQ-9 total) score (6.0% of total variance), while the least important predictor was smoking status. For emotional abuse, the most important predictor was recent involvement in a physical fight, accounting for 5.2% of total variance, followed by living with the mother (2.7% of total variance), while the least important predictor was sex. It is important to note that depression score was not included in multivariate analysis for emotional abuse to avoid the problem of multicollinearity. The most important predictor for sexual abuse was depression score (7.1% of total variance), the second most important was recent police arrest (0.6%) and the least important was parental marital status.

## Discussion

### Overview

The prevalence of childhood physical, emotional and sexual abuse was determined in a sample of first year students of Kuwait University using validated questionnaires. Our findings were compared with our hypotheses, results from other countries and previous studies done in Kuwait. Most students in our sample were fe-

male (70.9%), which was expected since the registry of the Deanship of Admission and Registration showed 67.0% of freshmen enrolled that semester were female. Therefore, the proportion reflects the university's admission structure in regard to sex.

### Physical, emotional and sexual abuse

The prevalence revealed by our study (35.6% physical, 53.5% emotional and 19.8% sexual abuse), while being in line with our hypothesis, surpassed the rates reported by the only national study done in Kuwait (16). This may be because our study defined abuse as any positive response. However, our definition of sexual abuse was deemed justifiable given the similar risk of developing negative outcomes after single versus multiple exposures to sexual abuse (17).

The higher rates of physical and psychological abuse in Saudi Arabia compared with Kuwait may be related to the popularity of larger-sized families in the former, which is positively associated with abuse (7,18). However, sexual abuse was slightly higher in Kuwait. A school-based survey of adolescents in 2007 in the United Arab

**Table 4 Association between types of child abuse and association of perpetrators**

Child abuse type	$\chi^2$	df
Physical vs emotional	261.7***	15
Physical vs sexual	164.2***	14
Emotional vs sexual	632.9***	15
Association of perpetrators: mother vs father	11.2***	10

\*\*\*P < 0.001.

df = degrees of freedom.

**Table 5 Predictors of child abuse: multiple (stepwise) regression analyses: final regression models**

Dependent variable predicted	Significant predictors: independent variable	Variance (%)	Total variance (%)	Standard beta	t-value
Physical abuse	Physical fight during past year	14.4	26.6	0.29***	13.8
	Depression (PHQ-9 total score)	6.0		0.26***	12.2
	Sex (male)	2.7		0.15***	7.0
	Age (25–34 years)	1.5		0.10***	5.0
	Parents' marital status (divorced/separated)	1.2		0.10***	4.9
	Household (live with other wives)	0.4		0.06**	3.03
	Smoking status (ex-smoker)	0.4		0.06**	0.0
	Emotional abuse	Physical fight during past year		5.2	9.4
	Living with mother	2.7	0.15***	6.8	
	Family income < 600 KD	0.5	0.07***	3.2	
	Faculty (Allied health)	0.4	0.06**	2.9	
	Father's education (primary)	0.2	0.05*	2.2	
	Smoking status (daily)	0.2	0.06**	2.7	
	Sex (male)	0.2	-0.05*	-2.3	
Sexual abuse	Depression (PHQ-9 total score)	7.1	8.4	0.26***	
	Police arrest during past year	0.6		0.08***	3.7
	Living with non-parent/other	0.4		0.06**	2.8
	Parents' marital status (divorced/separated)	0.3		0.06*	2.5

\* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .

Emirates revealed rates of physical and emotional abuse similar to Kuwait, but lower sexual abuse (19). Kuwait's higher reporting of sexual abuse compared with other Gulf countries may be a result of more social openness concerning sensitive topics (20). Although sexual abuse among adolescents in Lebanon in 2006 was higher than Kuwait, this may be related to Lebanon's political unrest (21). Child abuse rates among young adults in national studies done in the USA (2001–2002), United Kingdom (1998–1999) and Europe (2002–2010) are lower than those found in Arab countries (3–5). This may be because many Arab countries lack child protection legislation and those with recent policies may face challenges with implementation. However, variations in rates are expected when using different methods and instruments so comparisons may be misleading. Differences in cultural backgrounds may also affect one's perception, and hence reporting, of abuse (22).

### Co-occurrence of abuse

Exposure to one type of abuse was associated with increased likelihood of being exposed to other types, as hypothesized, and this is consistent with other studies (23).

### Perpetrators

Perpetrators being mainly non-parents was unexpected. Studies in Kuwait have conflicting findings regarding perpetrators (6,24). In contrast, physical abuse in the USA was mostly perpetrated by parents and sexual abuse by others (25,26). Our finding may be attributed to the popp

ularity of employing housemaids to care for children in Kuwait (20).

### Sociodemographics

More physical abuse among males was as predicted, and matches the literature (27). However, prevalence of emotional abuse was slightly higher among males and no significant difference between the sexes was found for sexual abuse, which contradicts other findings (27). Prevalence of abuse was higher among students whose parents were divorced/separated, which agrees with our hypothesis and previous research (6). Fathers' educational level was inversely related to physical abuse, but this applied only to mothers in other countries (28). Students with polygamous fathers were exposed to more physical, emotional and sexual abuse than those with monogamous fathers. Research on polygamy is scarce, but there is evidence of its association with intimate partner violence (29).

### Psychological distress

The significant association between all 3 types of child abuse and depression scores was in line with our hypothesis and replicated previous findings (8). Research shows depression can begin in early adulthood, as our study also showed (30). The linear association between exposure to child abuse and depression scores matches the literature (31). Students reporting that the abuse was not reasonable or justified is in line with distress levels revealed by the depression scores.

### Child abuse predictors

The results of the multivariate analyses point to violent behaviour as the most important predictor of physical and emotional abuse, which was unanticipated. This, however, is consistent with research showing that abuse during childhood is related to later violent delinquency (32). The minor contribution of family income may be explained by conditions in Kuwait that narrow the gap between socioeconomic classes, such as free health care and education. Depression score was the most important predictor of sexual abuse, as the literature shows (33). Parental divorce and single parenting are known predictors of abuse, and this was found in our study and matched our hypothesis (34). Sex was not as important a predictor of emotional and sexual abuse as in other studies (35).

### Limitations and strengths

The cultural sensitivity surrounding some questions, especially those related to sexual abuse, suggests prevalence may be underreported. Also, there is a likelihood of recall bias with self-reported questionnaires. University students typically belong to a higher socioeconomic class and this may have led to underestimation of the prevalence of abuse. Since most students were Kuwaiti, our results may not accurately reflect child abuse among non-nationals.

The strengths of the study include: the large and representative random sample of first year students

who were more likely to remember childhood abuse experiences; the use of internationally validated instruments with adequate reliability indices; and the availability of the researchers to assist participating students.

If these rates are an underestimation, it is alarming to consider how much higher the population rates are. Findings relating child abuse to polygamy and violent behaviour are also concerning and call for further research. Finally, the high rate of depression among Kuwaiti adolescents is an unexpected finding that requires attention.

### Conclusion

Our findings are in line with previous reports of relatively high prevalence of child abuse in Kuwait. With a clearer understanding of the risk factors of abuse, it becomes easier to identify children at risk and prevent maltreatment. The association of abuse with depression points to the importance of childhood experiences and widens the approach to managing mental illnesses. Further research on child abuse in Arab countries is necessary to study aspects that are specific to this region.

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**Competing interests:** None declared.

## Prévalence des mauvais traitements infligés aux enfants et association avec la dépression chez les étudiants de première année de l'Université du Koweït : une étude transversale

### Résumé

**Contexte :** La maltraitance des enfants est présente dans toutes les cultures et sociétés. Des recherches doivent être menées au Koweït pour documenter sa prévalence et les facteurs qui y sont associés.

**Objectifs :** Déterminer la prévalence des mauvais traitements infligés aux enfants signalés par les étudiants de première année de l'Université du Koweït en 2010 et mesurer leur association avec la dépression.

**Méthodes :** Un échantillon aléatoire d'étudiants de première année a répondu à la version en langue arabe des formulaires de dépistage des mauvais traitements infligés aux enfants de l'ISPCAN destinés aux jeunes adultes, puis a été évalué dans une optique de dépistage de la dépression à l'aide du questionnaire sur la santé des patients (PHQ-9).

**Résultats :** Parmi les 2508 répondants (70,9 % de femmes), 35,6 %, 53,5 % et 19,8 % avaient subi au moins une forme de violence physique, psychologique ou sexuelle, respectivement. La violence physique était plus fréquente chez les garçons ( $p < 0,001$ ). En ce qui concerne la violence psychologique et sexuelle, les différences entre les sexes n'étaient pas statistiquement significatives. La violence physique était associée au fait de vivre avec le père, la violence psychologique au fait de vivre avec la mère et la violence sexuelle au fait de vivre avec d'autres personnes que les parents ( $p < 0,001$ ). Dans la majorité des cas, les auteurs de mauvais traitements n'étaient pas les parents. Les mauvais traitements étaient plus fréquents chez les étudiants dont les parents étaient séparés/divorcés, pour lesquels les pères étaient polygames et le revenu familial mensuel était inférieur à 1800 dollars US. La dépression était associée de manière significative à tous les types de mauvais traitements, et à l'analyse de régression multiple, elle était l'un des principaux facteurs prédictifs de violence physique et sexuelle.

**Conclusion :** Les étudiants koweïtiens de première année ont été nombreux à déclarer avoir été victimes de mauvais traitements. Il serait fortement souhaitable de mettre en place des politiques de protection de l'enfance, d'améliorer la législation et d'appliquer des stratégies de prévention.

## انتشار إساءة معاملة الأطفال، واقتراح ذلك بالإصابة بالاكْتئاب بين طلاب السنة الأولى بجامعة الكويت: دراسة مقطعية

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### الخلاصة

الخلفية: قد تحدث إساءة معاملة الأطفال في مختلف الثقافات والمجتمعات. وكان من الضروري إجراء بحث في الكويت لتوثيق مدى انتشار إساءة معاملة الأطفال والعوامل المرتبطة بذلك.

الأهداف: هدفت الدراسة إلى تحديد مدى انتشار حالات إساءة معاملة الأطفال التي أبلغ عنها طلاب السنة الأولى بجامعة الكويت في عام 2010، وارتباطها بالاكْتئاب.

طرق البحث: أُخْتِرت عينة عشوائية من طلاب الجامعة للإجابة عن النسخة العربية من أدوات فحص إساءة معاملة الطفل الخاصة بالجمعية الدولية لمنع إساءة معاملة الأطفال وإهمالهم والموجهة للبالغين من الشباب، وقدرت إصابتهم بالاكْتئاب باستخدام استبيان صحة المرضى (PHQ-9).

النتائج: من بين 2508 مستجيبين للبحث (70.9٪ منهم من الإناث)، تبين تعرض 35.6٪، و53.5٪، و19.8٪ مرة واحدة على الأقل لشكل من أشكال الإساءة البدنية أو المعنوية أو الجنسية، على التوالي. وكانت الإساءة البدنية هي الشكل السائد للإساءة بين الفتيان ( $P < 0.001$ ). وبالنسبة للإساءة المعنوية والجنسية، فلم يكن هناك فرق يُذكر بين الجنسين. واقترنت الإساءة البدنية بالعيش مع الأب، بينما اقترنت الإساءة المعنوية بالعيش مع الأم، واقترنت الإساءة الجنسية بالعيش مع غير الآباء ( $P < 0.001$ ). وكان معظم المعتدين من غير الآباء. وانتشرت حالات الإساءة أكثر بين الطلاب لأبوين منفصلين/ مُطلقين، والذين كان آباؤهم متعددي الزوجات، والذين كان يقل دخل أسرهم الشهري عن 1800 دولار أمريكي. واقترنت الاكْتئاب بصورة كبيرة بجميع أشكال الإساءة، وتبين في الانحدار المتعدد أنه كان واحداً من أهم العوامل المنبئة للإساءة البدنية والجنسية.

الاستنتاجات: كان من الشائع قيام الطلاب الكويتيين بالإبلاغ عن التعرض إلى إساءة المعاملة. وتوجد حاجة ملحة إلى وضع سياسات لحماية الأطفال، وتحسين التشريعات ذات الصلة، واستراتيجيات الوقاية.

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