

# Intra-familial physical violence among Mexican and Egyptian youth

## Violência física intra-familiar entre jovens mexicanos e egípcios

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### Keywords

Intra-familial violence. Adolescent health. Prevalence. Risk factors. Socio-economic factors. Mexico. Egypt.

### Abstract

#### Objective

To determine the prevalence of experiencing intra-familial violence among Mexican and Egyptian youth and to describe its associated risk factors.

#### Methods

Data from questionnaires applied to 12,862 Mexican and 5,662 Egyptian youth, aged 10 to 19, who attended public schools were analyzed. Bivariate and logistic regression analysis were used to determine the relationship between socio-demographics, the experience of intra-familial violence and violence perpetration.

#### Results

The prevalence of having experienced intra-familial violence was comparable across the Mexican and Egyptian populations (14% and 17%, respectively). In Mexico, young men were more likely to have experienced such violence (OR=2.36) than women, whereas in Egypt, young women were at slightly greater risk than young men (OR=1.25). Older age, male gender and urban residence were independent correlates of experiencing intra-familial violence among Mexican youth. For Egyptian adolescents, in contrast, younger age, female gender and having non-married parents were independent correlates of victimization. Intra-familial violence victims were also more likely than non-victims to perpetrate violence (Mexico: OR=13.13; Egypt: OR=6.58).

#### Conclusions

Mexican and Egyptian youth experienced intra-familial violence at a relatively low prevalence when compared with youth of other countries. A strong association was found between experiencing intra-familial violence and perpetrating violence.

### Descritores

Violência intra-familiar. Saúde do adolescente. Prevalência. Fatores de risco. Fatores socioeconômicos. México. Egito.

### Resumo

#### Objetivo

Determinar a prevalência da violência intra-familiar sofrida por jovens mexicanos e egípcios, e descrever os fatores de risco associados.

#### Métodos

Os dados analisados foram obtidos de questionários aplicados a 12.862 mexicanos e 5.662 egípcios, jovens de 10 a 19 anos, que frequentam escolas públicas. O relacionamento entre fatores sociodemográficos, a violência sofrida e sua perpetração foram investigados por meio de análise bivariada e regressão logística.

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### Resultados

A prevalência de violência intra-familiar foi comparável entre as populações mexicana e egípcia (14% e 17%, respectivamente). No México, essa violência foi muito mais provável entre os homens jovens do que entre mulheres (OR=2,36), enquanto que no Egito era mais provável entre as mulheres jovens do que homens (OR=1,25). Idade mais elevada, gênero masculino e residência urbana são fatores associados a violência intra-familiar entre jovens mexicanos. Entre jovens egípcios, a idade mais baixa, o gênero feminino e pais não casados foram fatores associados a essa violência. Foi mais provável a repetição da violência pelos jovens que eram vítimas da violência intra-familiar (México: OR=13,13; Egito: OR=6,58).

### Conclusões

A prevalência de experimentar a violência intra-familiar de jovens mexicanos e egípcios foi baixa em comparação com jovens em outros países. Houve forte associação entre vítimas de violência intra-familiar e a repetição da violência.

## INTRODUCTION

Physical violence between family members is a significant public health problem. Even physical punishment of children which is considered "mild" or "acceptable", such as "hitting" or "smacking," appears to have long-term negative effects on psychological and even physical health.<sup>8,9</sup> Health sequelae associated with a history of physical abuse range from depression and substance abuse to chronic fatigue, sexually transmitted infections, and gastrointestinal disorders.<sup>4,15,16</sup> In this way, children and young people who witness violence perpetrated by one parent, as well as those who are victims of intra-familial violence, are at increased risk of perpetrating violence.<sup>5</sup> The range of effects caused by intra-familial physical violence indicate the public health significance of this issue.

Intra-family physical violence is commonly defined as hitting, slapping, smacking, kicking, burns, shaking and other types of physical contact causing physical harm, which occur between family members.<sup>17</sup> Most studies on violence have focused on "high-risk" adolescents (e.g., gang-members, drug users, runaways, homeless youth) or on communities characterized by high levels of violence and other problems, such as drug use.<sup>1,22</sup> However, in order to determine the broader public health ramifications of experiencing physical violence, there is a great need to assess the general population prevalence of, and risk factors for, this problem. Increasingly, this has been done in the United States<sup>3,7</sup> yet relatively few studies have been carried out in developing countries.<sup>10,22,23</sup> Such studies are needed in order to determine the needs, strategies, and target populations for public health policies and interventions to address this issue.

In this study, inter-familial violence among Mexican and Egyptian youth was examined in order to determine the consistency of and risk factors for this

phenomenon across two diverse and understudied socio-cultural settings. This was done by examining the prevalence of intra-familial physical abuse in representative samples of youth who attend public schools. Also, socio-demographic factors were explored as associated with this type of victimization, as well as the relationship between experiencing and perpetrating violence.

## METHODS

This study was part of two larger research projects on adolescent health which were carried out in Mexico and Egypt. In both countries, questionnaires were pilot-tested and informed consents were obtained from both parents and adolescents. Student anonymity was assured by not identifying the questionnaire respondents and by allowing only study personnel to handle questionnaires. The analytic sample for Mexico was drawn from baseline data collection for a longitudinal study of health among Mexican youth attending public schools in the central Mexican state of Morelos during the 1998-1999 academic year.<sup>13</sup> The sampling method employed a random, multi-stage cluster design, with selection proportional to the number of schools in each of three stratum (i.e., junior high school, high school, university). Response rate was 98.6%, comprising 13,293 Mexican youth, aged 10 to 24, who completed self-administered questionnaires on a variety of health issues, including intra-familial violence. The Egyptian sample was drawn from a nationally representative, multistage cluster sample of youth attending public schools during 1997.<sup>11</sup> Study personnel administered questionnaires on health issues in Egyptian youths' homes, resulting in a sample of 9,128 adolescents aged 10-19 years. In order to assure comparability across these two samples, analytic subsamples for the current study were selected from adolescents aged 10 to 19 years who attended public school, and were not married at the time of data collection. Appli-

cation of these selection criteria resulted in subsamples of 12,862 Mexican and 5,662 Egyptian youth.

In both Mexico and Egypt, questions assessing experience of intra-familial violence asked whether a family member had ever hit the respondent. Respondents were also asked if they had ever hit someone else, without limiting the target of this act to family members.

Potential socio-demographic correlates of intra-familial violence were also measured, including gender, age, and grade. Urban or rural residence was derived using census data in both countries. Moreover, an index was constructed to reflect high, middle, and low socio-economic level, using information on housing characteristics, ownership of durable consumer goods, and either family income (Mexico) or occupation of head of the household (Egypt). Adolescents (in Mexico) or a responsible adult (in Egypt) answered questions about parental level of education and parental marital status.<sup>11,13</sup>

All statistical analysis were carried out using Stata

(version 7.0) and adjusted for sample weights and design effects in order to generate population-level statistics. First, univariate analyses were used to determine the distribution and prevalence of the variables of interest. Then bivariate analyses were performed using logistic regression to obtain crude odds ratios (OR) and 95% confidence intervals (95% CI). Finally, multiple logistic regression was used to control for multiple confounding variables and generate adjusted OR and 95% CI.

The Research Ethics Committee of the National Institute of Public Health approved the study in Mexico, and the Institutional Review Board of the American University in Cairo approved the Egyptian study.

## RESULTS

The mean ages of the study populations were comparable across the Mexican and Egyptian samples (mean =13.7 years and 13.2 years, respectively). There were more females in the Mexican (56%) than in the Egyptian sample (48%). Most of the Mexican students were in junior high school (84%) while in Egypt the

**Table 1** - Socio-demographic data, prevalence of intra-family victimization\* and violence perpetration\*\* among adolescents attending public school in Egypt (n=5,662), 1997, and Mexico (n=12,862), 1998-1999.

Variables	Mexican students (N=12,862)		p-value	Egyptian students (N=5,662)		p-value
	Cases (13.8 %) N (%)	Non-cases (86.2%?) N (%)		Cases (17.2%) N (%)	Non-cases (82.8%?) N (%)	
Age						
10-12	415 (23.5)	3,267 (29.5)		543 (55.8)	2,007 (42.8)	
13-15	1,005 (56.8)	6,005 (54.1)		329 (33.8)	1,670 (35.6)	
16-19	350 (19.8)	1,820 (16.4)	0.00	102 (10.5)	1,011 (21.6)	0.00
Gender						
Young women	665 (37.6)	6,581 (59.3)		502 (51.5)	2,209 (47.1)	
Young men	1,105 (62.4)	4,511 (40.7)	0.00	472 (48.5)	2,479 (52.9)	0.01
School level						
Elementary	1,431 (80.9)	9,333 (84.1)		349 (35.8)	1,290 (27.5)	
Junior High	318 (18.0)	1,612 (14.5)		173 (17.8)	1,511 (32.2)	
High school	21 (1.2)	147 (1.3)	0.01	452 (46.4)	1,887 (40.3)	0.00
Residence						
Urban	1,180 (66.7)	6,414 (57.8)		433 (44.5)	1,857 (39.6)	
Rural	590 (33.3)	4,678 (42.2)	0.00	541 (55.6)	2,831 (60.4)	0.005
Socio-economic level						
High	429 (24.2)	2,338 (21.1)		282 (32.1)	1,516 (35.3)	
Middle	1,009 (57.0)	5,792 (52.2)		329 (37.4)	1,540 (35.9)	
Low	332 (18.8)	2,962 (26.7)	0.00	268 (30.5)	1,239 (28.9)	0.19
Mother's education						
<6 years of school	449 (25.4)	3,029 (27.4)		236 (60.4)	1,080 (57.5)	
Completed elementary school	293 (16.6)	1,885 (17.0)		105 (26.9)	513 (27.3)	
Completed junior high school	467 (26.4)	2,911 (26.3)		1 (0.3)	17 (0.9)	
Completed high school	484 (27.4)	2,768 (25.0)		20 (5.1)	91 (4.8)	
University	75 (4.2)	479 (4.3)	0.216	29 (7.4)	179 (9.5)	0.43
Father's education						
<6 years of school	433 (24.7)	2,890 (26.4)		148 (30.8)	736 (30.8)	
Completed elementary school	271 (15.5)	1,775 (16.2)		168 (35.0)	717 (30.0)	
Completed junior high school	453 (25.9)	2,826 (25.8)		10 (2.1)	57 (2.4)	
Completed high school	505 (28.8)	2,915 (26.6)		38 (7.9)	206 (8.6)	
University	90 (5.1)	531 (4.9)	0.216	116 (24.2)	674 (28.2)	0.20
Parental marital status						
Married	1,612 (91.1)	9,973 (89.9)		773 (88.2)	3,863 (90.3)	
Other (divorced, separated, widowed)	158 (8.9)	1,119 (10.1)	0.129	103 (11.8)	414 (9.7)	0.06
Youth hit someone else						
No	873 (49.3)	10,416 (93.9)		550 (56.6)	4,197 (89.6)	
Yes	897 (50.7)	676 (6.1)	0.000	421 (43.4)	487 (10.4)	0.000

\*Has been hit by any family member

\*\*Has hit someone else

**Table 2** - Correlates of victimization (intra-family violence)\* among adolescents attending public school in Mexico, 1998-1999.

Variables	Mexican students (N=12,862)			
	OR**	95% CI	OR***	95% CI
Age				
10-12	1.0		1.0	
13-15	1.32	1.17-1.49	1.33	1.16-1.53
16-19	1.51	1.30-1.76	1.31	1.09-1.57
Gender				
Young women	1.0		1.0	
Young men	2.42	2.19-2.69	1.92	1.71-2.17
Residence				
Urban	1.46	1.31-1.62	1.29	1.13-1.47
Rural	1.0		1.0	
Socio-economic level				
High	1.0		1.0	
Middle	0.95	0.84-1.07	0.89	0.74-1.08
Low	0.61	0.52-0.71	1.06	0.91-1.23
Father's education				
<6 years of school	0.88	0.69-1.13	0.90	0.67-1.20
Elementary school	0.90	0.70-1.16	0.97	0.72-1.31
Junior high school	0.94	0.74-1.20	0.88	0.66-1.18
High school	1.02	0.80-1.30	0.93	0.70-1.24
University	1.0		1.0	
Parental marital status				
Married	1.0		1.0	
Other (divorced, separated, widowed)	0.87	0.73-1.04	1.01	0.82-1.25
Youth hit someone else				
No	1.0		1.0	
Yes	15.83	14.02-17.87	14.22	12.56-16.10

\*Victims of physical violence by any family member  
\*\*Crude odds ratio  
\*\*\*Odds ratio adjusted by the variables included in the table

population was more evenly distributed across grades, with 29% in elementary school, 30% in junior high, and 41% in high school. Most Mexican and Egyptian students lived in urban areas (59% and 60%, respectively) and were from the middle socio-economic level group (53% and 36%, respectively). In both countries, 90% of the students' parents were married.

The prevalence of intra-familial violence in the study samples was slightly lower in Mexico (14%) than in Egypt (17%). Age was significantly associated with having experienced intra-familial violence; however, the relationship was positive for Mexicans ( $p < 0.001$ ) and inverse for Egyptians ( $p < 0.001$ ) (Table 1). Similarly, gender was a statistically significant correlate of victimization, but with a higher prevalence among males than females in Mexico ( $p < 0.001$ ) and a slightly higher prevalence among females than males in Egypt ( $p = 0.01$ ). In both populations, youth who lived in urban areas were more likely to be victimized by a family member than those who lived in rural areas. Socio-economic level was associated with intra-familial violence in Mexico only, and this association was negative ( $p < 0.001$ ). Mexican and Egyptian youth who were victims of intra-family violence were also more likely than non-victims to self-report violence perpetration ( $p < 0.001$  in both countries).

In multivariate models, significant bivariate correlations generally remained statistically significant. Table 2 shows the results for the model using the

Mexican data. Older age, male gender and urban residence were independent correlates of experiencing intra-familial violence among Mexican youth. However, the increased risk associated with low socio-economic level became non-significant when controlling for these other risk factors.

Results from the model using the Egyptian data are shown in Table 3. In this model, younger age, female gender and having non-married parents were independent correlates of victimization by a family member. Finally, the association between experiencing and perpetrating physical violence was strong in both Mexico (OR=13.13, 95% CI: 11.58-14.88) and Egypt (OR=6.58, 95% CI: 5.53-7.80), even after controlling for other variables.

## DISCUSSION

The prevalence of experiencing intra-familial violence among Mexican (14%) and Egyptian (17%) youth who attend public school was relatively low compared to other estimates found for Latin American and Arab youth. For instance, a study in Alexandria, Egypt, found that 37.5% of elementary and junior high school students had been beaten by their parents.<sup>24</sup> Another study among Arab adolescents living in Israel found that 26% reported being slapped, pushed, or kicked by a parent in the previous 12 months.<sup>10</sup> A higher prevalence of being hit by parents has also been reported in Santiago, Chile, with higher rates found among youth who attend private (69%)

than public schools (46%).<sup>14</sup> Hence, attending public schools, as all the children in the present sample did, may be protective against victimization. No such studies have been conducted previously in Mexico. However, a nationally representative study on partner violence found that 42% of all Mexican women reported having been beaten by their parents during childhood.\* The much lower prevalence found in the present study may be due to a cohort effect characterized by lower levels of physical punishment in more recent generations, or, perhaps, to the study's inability to assess the prevalence of victimization among youth dropouts from school and who may be at much higher risk than those who attend school.

The present study also suggested that having experienced intra-familial violence was more than twice as likely among male Mexican youth than among female youth (OR=2.36, 95% CI: 2.08-2.68), while Egyptian females were at slightly greater risk than their male counterparts (OR=1.25, 95% CI: 1.07-1.47). Other studies in these countries have not reported results on such gender differences. However, studies in the US have found higher prevalence of victimization, repeat victimization, and violence perpetration among male youth than among female youth.<sup>6,20</sup> Gender differences found in the prevalence of victimization and violence perpetration may be related to divergent gender norms where these events take place. For instance, the aforementioned study among Arab

youth in Israel found that physical abuse of children by fathers was more likely among male youth, and abuse by mothers was more likely among female youth.<sup>13</sup> This characteristic of intra-familial violence, as well as others, should be further explored, for example, through studies that combine qualitative and quantitative methods and that include populations from different cultures.

Finally, in both samples, the study found strong associations between having been hit by a family member and having hit another person. Studies in the US and other developed nations have found similar results.<sup>2,19,21</sup> Research based on social learning theory explains this association as a process of observing violent behavior and then replicating the behavior observed.<sup>2</sup> There appears to be long-term, inter-generational implications of this learned behavior. In the US, experiencing corporal punishment as a child has been associated with physical punishment and abuse of one's own children,<sup>9</sup> an association that appears stronger than other risk factors, such as socio-economic level, gender, alcohol abuse, and witnessing domestic violence as a child. Experience of corporal punishment while young also appears to increase the likelihood of spousal abuse.<sup>2</sup>

The main limitation of the present study concerns its cross-sectional nature and the resulting inability to determine causality. Another limitation concerns the

**Table 3** - Correlates of victimization (intra-family violence)\* among adolescents attending public school in Egypt, 1997.

Variables	OR**	Egyptian students (N=5,662)		
		95% CI	OR***	95% CI
Age				
10-12	2.68	2.14-3.35	2.95	2.30-3.80
13-15	1.95	1.54-2.47	2.07	1.60-2.69
16-19	1.0		1.0	
Gender				
Young women	1.19	1.03-1.37	1.28	1.09-1.49
Young men	1.0		1.0	
Residence				
Urban	1.22	1.06-1.40	1.21	1.03-1.43
Rural	1.0		1.0	
Socio-economic condition				
High	1.0		1.0	
Middle	1.16	0.97-1.40	1.08	0.87-1.33
Low	1.14	0.96-1.37	1.13	0.93-1.37
Parents' education				
<6 years of school	1.24	1.01-1.53	1.41	1.11-1.80
Elementary school	1.31	1.05-1.63	1.38	1.08-1.78
Junior high/High school	1.09	0.80-1.49	1.13	0.80-1.58
University	1.0		1.0	
Parental marital status				
Married	1.0		1.0	
Other (divorced, separated, widowed)	1.24	0.99-1.56	1.38	1.08-1.78
Youth hit someone else				
No	1.0		1.0	
Yes	6.60	5.63-7.72	7.04	5.93-8.36

\*Victims of physical violence by any family member

\*\*Crude odds ratio

\*\*\*Odds ratio adjusted by the variables included in the table

study measure of experiencing intra-familial violence. Since this measure did not specify the violence perpetrator, the results classified youth as victimized, even though they may have experienced only non-parental physical victimization. Nevertheless, this broad classification may reflect important correlates of violence inflicted by siblings and non-parental kin. These relationships may be more important in societies such as Mexico and Egypt where extended kin relations are more important than in developed nations where nuclear families are predominant. This study measure also did not take into account more intense experiences of violence. However, since studies have shown that even "hitting" or "smacking" children can have negative consequences,<sup>8,9</sup> examination of this type of intra-familial violence is merited.

In addition, the cross-sectional nature of the study did not allow for measuring repeat victimization. Future studies should clarify the source of physical abuse, its intensity, and its frequency. Another limitation of this comparison is the present study's inability to control for the influence of religion, given that in the Egyptian sample the majority of the respondents were Muslims while in the Mexican sample most

of the study participants were Catholics. Finally, the analytic samples used were somewhat different, since the Egyptian sample comprised nationally representative data while the Mexican sample was representative only of one centrally located state. However, these samples were comparable in their inclusion of same age public school students, as well as their use of similar survey instruments.

The obtained results suggest that youth in developing nations, such as Mexico and Egypt, may share with youth populations from more developed nations a general pattern of association between experiencing intra-familial violence and violence perpetration. Future research should attempt to explain the variation in prevalences of intra-family violence among young men versus young women. Given the multiple negative psychological, behavioral and physical health outcomes linked to the experience of violence during childhood, prevention of interpersonal violence should be a public health priority.<sup>12</sup> To design effective interventions, future studies should focus on the dynamics of intra-family violence, as well as social, cultural, and psychological risk factors that should be considered in developing and evaluating such interventions.<sup>6,18</sup>

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