



# Prevalence of Child Abuse and Correlations with Family Factors Among Elementary School-aged Children

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## Abstract

**Background:** Child abuse is a significant health and social problem. Different social and family factors have effects on child abuse.

**Objectives:** This study was carried out to determine the prevalence of child abuse in three domains of physical abuse, emotional abuse, and neglect among a sample of elementary school children in Iran.

**Materials and Methods:** In this cross-sectional study, a total of 400 elementary school children were selected through multistage cluster sampling from Shahroud, Iran, and assessed for all child abuse domains, except for sexual abuse, using a validated self-administered Persian questionnaire. The collected data were analyzed with SPSS, using descriptive statistics, *t*-test, chi-square test, Fisher's exact test, and multiple linear regression analysis ( $P \leq 0.05$ ).

**Results:** The mean age of the participants was 10.83 years ( $SD = 1.9$ ). Overall, 63.8%, 27%, and 90.3% of children reported emotional abuse, physical abuse, and neglect, respectively. There were significant associations between the mother's employment status and neglect ( $P < 0.001$ ), father's education and physical child abuse ( $P = 0.03$ ), and father's smoking and emotional child abuse ( $P < 0.001$ ). The results showed that lower levels of family socioeconomic status had significant effects on neglect ( $P = 0.006$ ) and emotional child abuse ( $P = 0.003$ ).

**Conclusions:** Among the studied children, 73.8% declared at least one type of child abuse. It seems that the prevalence of neglect increased among school-aged children compared to previous studies from Iran. The low socioeconomic status of the family is significantly related to child abuse. Family physicians and school counselors play important roles in identifying and reporting child abuse and neglect. Therefore, they should be more involved in the prevention of child abuse.

**Keywords:** Child Abuse, Physical Abuse, Emotional Abuse, Neglect, Iran

## 1. Background

Violence against children is a significant public health and social problem. Child abuse and maltreatment can be described as the parents or other caregivers' failure to provide care and protection for children, resulting in harm, the potential for harm, or threat of harm to a child even if the harm is unintentional. Child abuse takes many forms (physical, sexual, emotional, and neglect) and occurs in many settings, including the home, school, community, care and justice systems, and the Internet. Beyond death, physical injury, and disability, violence can lead to stress, which impairs the child's brain development and damages the nervous and immune systems. These harms are associated with delayed cognitive development, poor school performance, and dropout, mental health problems, suicidal

attempts, increased health-risk behaviors, revictimization, and perpetration of violence (1-3).

In 2017, the World Health Organization (WHO) estimated that up to one billion minors in the age range of 2 - 17 years endured physical, emotional, or sexual violence (4, 5). In 2017, the United Nations Children's Fund (UNICEF) reported that every seven minutes, an adolescent is killed by an act of violence. Around 300 million children aged 2 - 4 years are regularly subjected to violent discipline at home worldwide. Statistics show that nearly 15 million adolescent girls, age 15 - 19 years, have experienced forced sexual intercourse in their lifetime (4).

Moody et al. (6), in a systematic review, reported the rate of physical abuse to be 12.0% and 27.0% in Europe and 50.8% and 60.2% in Africa among girls and boys, respectively. According to reports, the median rates of emotional

abuse in Europe were 12.9% and 6.2% among girls and boys, respectively. Moreover, the median rates of neglect among girls and boys were 41.8% and 39.1% in Africa, 54.8% and 56.7% in South America, and 26.3% and 23.8% in Asia, respectively (6). In addition, the National Child Abuse and Neglect Data system (NCANDS) showed that the prevalence of neglect, physical abuse, and sexual abuse was 74.9%, 18.3%, and 8.6%, respectively, in 2017, and the comparison of the national rounded number of victims from 2013 to 2017 showed an increase of 2.7% in the United States (6). In Iran, Mohammadi et al. (7) conducted a systematic review in 2014 and found the prevalence of physical abuse, emotional abuse, and neglect to be 43.591%, 64.533%, and 40.945%, respectively.

Several family-related factors have been shown to have significant effects on child abuse. Family socioeconomic status is one of these factors, which is determined by parental income, education, and employment (8). Parenting is considered to be strongly influenced by the family's socioeconomic status (9). Generally, Iranian families have changed over the years, and the poverty rate has increased in Iran in the past decades. The percentage of children with unemployed parents has also risen in recent years (10). National reports conclude that in the 2016 - 2017 fiscal year, 14.9% of the urban population and 11.6% of the rural population were below the absolute poverty line in Iran (11). The cost of living has increased in the past years, and more and more Iranian families have fallen below the poverty line (12), resulting in increased social problems (13).

Poverty is an important factor in child maltreatment (14, 15).

## 2. Objectives

Therefore, it is important to monitor child maltreatment trends and patterns to explore the possible effective factors. We performed the present study as the economic pressure on Iranian families has increased in recent years, causing a decline in their socioeconomic status, which is one of the factors affecting child abuse and neglect. Overall, the impact of these social conditions on the prevalence of child abuse must be determined to inform and improve policy and practice for better planning against child maltreatment in Iran.

## 3. Materials and Methods

This cross-sectional study was performed in 2018 on 400 school students (age 7-13 years), who were selected via

multistage cluster sampling to assess all domains of child abuse, except for sexual abuse. According to previous studies in Iran, the pooled estimates of the prevalence of the three domains (emotional abuse, physical abuse, and neglect) of abuse in both genders were 43.591%, 64.533%, and 40.945% (7). Taking into account these prevalence rates and according to  $\alpha = 0.05$ ,  $P = 50\%$ , and  $d = 0.05$ , the sample size was calculated as 384 participants, which was considered to be 400 participants in the present study.

The participants were selected through classified randomized sampling in each cluster among the students of elementary schools (grades 1-6) in rural areas of Shahroud, Semnan Province, Iran. Some explanations about the study were given to all the students in all clusters, and students who were not willing to participate in the study were excluded and replaced by others. It was not necessary to register the students' names or characteristics, and the students were ensured that their information would remain confidential.

Data were collected using a valid and reliable Persian questionnaire containing 26 questions in three domains of emotional abuse, physical abuse, and neglect with 10, 10, and six questions, respectively. The mean clarity and relevance of the questionnaire were 80.36% and 92.5%, respectively, and the relevance of questions ranged from 90.14 to 97.2. Further analysis of data showed that the average intra-class correlation and Cronbach's alpha coefficients were 0.95 and 0.92, respectively. For scoring the questionnaire, children with positive responses to at least one question related to each domain of emotional abuse, physical abuse, and neglect were considered the victims of that particular domain. Children with a positive answer to at least one question related to each domain of emotional abuse, physical abuse, and neglect were included in the total number of child abuse victims in all domains (16).

Furthermore, demographic variables, such as age, sex, living conditions, birth order of the child, employment, level of education, marital status, and current smoking of parents, were determined. The following socioeconomic data were also collected: Household assets (e.g., refrigerators, freezers, washing machines, color television, vacuum cleaners, microwave, computers, mobile phones, cars, and motorcycles), homeownership, number of rooms and private rooms, attending music, swimming, or English classes, and eating at a restaurant in the past month. The collected data were analyzed with SPSS, using descriptive statistics, *t*-test, chi-square test, Fisher's exact test, and multiple linear regression analysis. A *P*-value less than 0.05 was considered statistically significant.

#### 4. Results

Demographic characteristics of children, their families, and the type of child abuse are presented in [Table 1](#). Of 400 respondents aged 7 - 13 years (mean age = 10.83 years; SD = 1.9), 39% were boys. The frequency of child abuse was significantly higher in boys than in girls in all child abuse domains. Our findings showed that the prevalence rates of emotional abuse, physical abuse, and neglect were 63.8%, 27%, and 90.3%, respectively.

Our findings indicated the insignificant main effect of child's age, birth order, single parents, father's employment, mother's education, and mother's smoking on the type of child abuse. On the other hand, there were significant associations between the mother's employment and neglect ( $P < 0.001$ ), father's education and physical child abuse ( $P = 0.03$ ), and father's smoking and emotional child abuse ( $P < 0.001$ ). The results showed that the family socioeconomic status had significant effects on neglect ( $P = 0.006$ ) and emotional child abuse ( $P = 0.003$ ). The prevalence of physical abuse, emotional abuse, neglect, and total child abuse (having at least one domain) is shown in [Table 2](#).

[Table 3](#) presents the effects of predictive factors on the dimensions of child abuse based on multiple linear regression analysis. According to [Table 3](#), the predictive factors of emotional child abuse were gender and socioeconomic status. Also, the predictive factors of physical child abuse were gender, educational level, and father's current smoking.

#### 5. Discussion

This study adds to the literature on the association between child abuse and family socioeconomic status among Iranians and provides an estimation of the prevalence of different subscales of child abuse among elementary school students in Shahroud, Iran. The results showed that a great proportion of the students (73.8%) had experienced at least one domain of child abuse. Neglect was recognized as the most common type of child abuse (90.3%). Inadequate food, clothing, shelter, and access to educational and health services for children have significant effects on their future and expose them to a greater risk of disease, infection, retardation, and even death. Moreover, low family socioeconomic status has significant effects on neglect.

Emotional abuse was also the second most common type of child abuse (63.8%). Emotional abuse, which can be

either verbal or non-verbal, is inflicted by ignoring or dismissing a child's emotional reactions or shaming and humiliating a child. It was found that Iranian parents do not take care of the psychological and emotional needs of their children, which can be even more problematic than physical abuse for children.

The literature suggests that the child's gender has an impact on child abuse (17). Based on our findings, the number of abused boys was significantly higher than the number of abused girls, and as a result, the cycle of violence is more evident in males than females (18). Moreover, our results revealed that the mother's employment status increased child neglect considerably. Although studies show that women's increasing presence in professions increases the family income, mothers spend less time with their children, which has consequences, such as increased social damage to children (8, 19).

In the current study, father-related factors in child abuse were smoking and a low level of education. In this regard, Guterman et al. (20) reported that fathers' college education or higher was significantly associated with a lower risk of physical child abuse. Our results support some previous studies, which showed no significant link between the father's employment status and risk of child abuse (20). Our findings indicated that fathers' university education is an important protective factor against physical child abuse. Various studies have noted that younger fathers have a particularly low annual income because of their relatively lower educational status, and they have relatively fewer job opportunities in comparison with older fathers (21). The existing literature has firmly established that socioeconomic status is a key predictor of child abuse (22). Also, we found that low family socioeconomic status was significantly related to emotional child abuse.

According to previous studies, parental smoking is strongly related to child abuse. First, children of parents who smoke are left unprotected against the harmful health effects of smoking cigarettes (22, 23). Second, parental smoking has a significant association with child abuse. Walsh et al. (24), in their study, showed that parental substance abuse was associated with more than a two-fold increase in the risk of exposure to both physical and sexual child abuse. Our results also showed a significant relationship between the father's current smoking and emotional child abuse. Indeed, drug use or smoking of parents can reduce the parent-child relationship in the family. Therefore, one of the most effective ways to reduce the prevalence of child abuse is that programs focus on parenting education interventions and treatment of parental addic-

**Table 1.** Demographic Characteristics of Participants, Their Families, and Types of Child Abuse (N = 400)<sup>a</sup>

Variables	Total	Child Abuse					
		Emotional		Physical		Neglect	
		Yes	No	Yes	No	Yes	No
<b>Child's age, y</b>	10.83 ± 1.9	10.83 ± 1.92	10.83 ± 1.87	10.56 ± 1.97	10.9 ± 1.98	10.84 ± 1.9	10.44 ± 0.8
P-values		0.97		0.14		0.43	
<b>Sex</b>							
Male	156 (39)	169 (71.3)	68 (28.7)	73 (39.9)	110 (60.1)	15 (6.6)	214 (93.4)
Female	243 (61)	86 (57)	65 (43)	34 (25)	102 (75)	1 (0.7)	146 (99.3)
P-values		0.004 <sup>b</sup>		0.005 <sup>b</sup>		0.006 <sup>b</sup>	
<b>Family status</b>							
Birth order a	1.62 ± 0.78	1.64 ± 0.64	1.6 ± 0.74	1.62 ± 0.7	1.62 ± 0.8	1.62 ± 0.78	1.6 ± 0.7
P-values		0.7		0.99		0.93	
<b>Living with family</b>							
Yes	362 (90.5)	234 (66.7)	117 (33.3)	102 (34.5)	194 (65.5)	330 (96.2)	13 (3.8)
No	38 (9.5)	14 (63.6)	8 (36.4)	4 (36.4)	7 (63.6)	19 (95)	1 (5)
P-values		0.77		0.89		0.78	
<b>Single parent</b>							
Yes	18 (4.5)	12 (66.7)	6 (33.3)	4 (44.4)	5 (55.6)	15 (93.8)	1 (6.3)
No	382 (90.5)	236 (66.5)	119 (33.5)	102 (34.2)	196 (65.8)	334 (96.3)	13 (3.7)
P-values		0.98		0.52		0.6	
<b>Father's employment</b>							
Governmental	185 (46.3)	113 (62.4)	67 (37.6)	43 (28.5)	108 (71.5)	165 (94.8)	9 (5.2)
Self-employed	185 (46.3)	117 (65.7)	61 (34.3)	59 (38.3)	95 (61.7)	172 (98.9)	2 (1.1)
Unemployed	14 (3.5)	12 (85.7)	2 (14.3)	4 (36.4)	7 (63.6)	13 (92.9)	1 (7.1)
P-values		0.2		0.19		0.08	
<b>Mother's employment</b>							
Housewife	23 (5.8)	154 (63.9)	87 (36.1)	75 (35)	139 (65)	230 (97.9)	5 (2.1)
Governmental	75 (18.8)	49 (67.1)	24 (32.9)	12 (20.7)	46 (79.3)	67 (95.7)	3 (4.3)
Unemployed	250 (62.5)	12 (54.5)	10 (45.5)	8 (42.1)	11 (57.9)	21 (100)	0
P-values		0.31		0.08		< 0.001 <sup>b</sup>	
<b>Father's education</b>							
Illiterate	3 (0.8)	2 (66.7)	1 (33.3)	2 (100)	0	2 (100)	0
Primary or middle	89 (22.3)	58 (67.4)	28 (32.6)	30 (42.3)	41 (57.7)	81 (98.8)	1 (1.2)
High school or higher	278 (69.5)	181 (66.5)	91 (33.5)	69 (30.9)	154 (69.1)	254 (95.1)	13 (4.9)
P-values		0.98		0.03 <sup>b</sup>		0.26	
<b>Mother's education</b>							
Illiterate	6 (1.5)	5 (83.3)	1 (16.7)	1 (16.7)	5 (83.3)	6 (100)	0
Primary or middle	94 (23.5)	65 (69.9)	28 (30.1)	30 (40.5)	44 (59.5)	85 (98.8)	1 (1.2)
High school or higher	273 (68.3)	176 (66.2)	90 (33.8)	72 (39.2)	147 (67.1)	249 (95)	13 (5)
P-values		0.68		0.36		0.37	
<b>Father's smoking</b>							
Yes	52 (13)	46 (88.5)	6 (11.5)	18 (42.9)	24 (57.1)	48 (96)	2 (4)
No	344 (86)	207 (62.2)	126 (37.8)	89 (32.4)	186 (67.6)	311 (95.7)	14 (4.3)
P-values		< 0.001 <sup>b</sup>		0.39		0.98	
<b>Mother's smoking</b>							
Yes	4 (1)	3 (75)	1 (25)	2 (66.7)	1 (33.3)	4 (100)	0
No	393 (98.3)	250 (65.4)	132 (34.6)	104 (33)	211 (67)	356 (96.7)	16 (4.3)
P-values		0.7		0.2		0.8	
<b>Socioeconomic status</b>							
Poor	48 (12)	21 (46.7)	24 (53.3)	9 (26.5)	25 (73.5)	42 (95.5)	2 (4.5)
Moderate	116 (29)	72 (63.2)	42 (36.8)	32 (35.2)	59 (64.8)	104 (93.7)	7 (6.3)
Good	54 (13.5)	41 (80.4)	10 (19.6)	21 (43.8)	27 (56.3)	50 (98)	1 (2)
P-values		0.003 <sup>b</sup>		0.27		0.48	

<sup>a</sup>Values are expressed as mean ± SD or No. (%).<sup>b</sup>P < 0.05 was significant.

**Table 2.** Prevalence of Child Abuse in Three Domains of Physical, Emotional, and Neglect (N = 400)

Domain of Child Abuse	Positive, No. (%)	Negative, No. (%)	No Response, No. (%)
<b>Emotional</b>	255 (63.8)	133 (33.3)	12 (3)
<b>Physical</b>	108 (27)	212 (53)	80 (20)
<b>Neglect</b>	361 (90.3)	16 (4)	23 (5.8)
<b>Total (having at least one domain)</b>	295 (73.8)	2 (0.5)	103 (25.8)

**Table 3.** Effect of Demographic Factors on the Dimensions of Child Abuse by Multiple Linear Regression

Dimensions of Child Abuse	$\beta$	SE	t	P-Values <sup>a</sup>	95% Confidence Interval	
<b>Emotional</b>						
Gender	0.79	0.31	2.52	0.01	0.17	1.4
Socioeconomic status	0.77	0.23	3.4	0.001	0.32	1.2
<b>Physical</b>						
Gender	0.4	0.14	2.88	0.004	0.13	0.68
Father's education	-0.47	0.16	-2.97	0.003	-0.78	-0.16
Father's smoking	-0.46	0.2	-2.29	0.02	-0.85	-0.07
<b>Neglect</b>						
Socioeconomic Status	0.25	0.09	2.75	0.006	0.07	0.45

<sup>a</sup>P < 0.05 was significant.

tion and smoking. In this regard, Dawe and Harnett (25) found significant improvements in different domains of family functioning, such as reduction of child abuse and child behavior problems, via parenting education for families with a parent on methadone maintenance (25). Therefore, helping fathers to quit smoking can effectively prevent child abuse.

There are different reports of the prevalence of child abuse and related deaths from different countries around the world. A meta-analysis of 68 studies from China in 2015 found the lifetime prevalence of physical abuse, emotional abuse, neglect, and sexual abuse to be 26.6%, 19.6%, 26%, and 8.7%, respectively (26). It was found that the prevalence of child abuse was lower in China than in Iran. In 2017, one-year and lifetime prevalence rates of physical abuse (75.5% and 78.5%, respectively), emotional abuse (84.5% and 85.7%, respectively), and sexual abuse (21.0% and 23.8%, respectively) were reported in schools of India (27), which were found to be higher than the rates reported in Iran. Our findings showed that the prevalence of neglect increased among school-aged children compared to previous studies in Iran.

Cultural differences in different cities of Iran may have an impact on people's attitudes towards child abuse. In this regard, Pirdehghan et al. (28), in a study conducted in Yazd Province, Iran, reported neglect (83.8%), psycholog-

ical abuse (76.1%), physical abuse (36.1%), and sexual abuse (28.8%) in secondary school students. Moreover, Stephenson et al. (29) assessed child maltreatment among school children (11 - 18 years) in Kurdistan Province and found physical maltreatment in 38.5% and 43.3% of the students at home and school, respectively. Miri et al. (30) also investigated the prevalence of child abuse among high school students of Bam, Iran, and found that 20.02% of the students suffered from physical abuse, 24.59% from neglect, and 33.16% from emotional abuse.

The present study had some limitations. First, interviewing the elementary school-aged children was a limitation, particularly interviews with a seven-year-old child. To deal with this problem and collect the data as accurately as possible, a school counselor who was a psychologist helped our research team. The other limitations of this study were a lack of questions for sexual abuse and a small sample size. Future researchers are suggested to replicate the present study on children of addicted parents who are treated in methadone maintenance treatment (MMT) programs and compare them with other addicted parents.

### 5.1. Conclusions

Child maltreatment can be prevented through providing supportive interventions for parents and caregivers, education and life skills training, strengthening economic



security and family income, offering high-quality response and support services, creating and sustaining safe environments for children, and implementing and enforcing laws against child maltreatment. At schools, family physicians and counselors play important roles in identifying child abuse, reporting child abuse cases to child welfare agencies, preventing further harm to abused children (and other children in the family), and providing ongoing support and education for families to prevent child abuse.

## Footnotes

**Authors' Contribution:** Raheleh Rafaiee designed and performed the study and co-wrote the paper. Fahimeh Mohseni was involved in research planning, analyzed the data, and wrote the manuscript with input from all authors. Nafiseh Akbarian collected the data.

**Conflict of Interests:** The author declares no conflict of interest.

**Ethical Approval:** The present study was completed in agreement with the Declaration of Helsinki and the Ethical Guidelines for Medical and Health Research established by the Ministry of Health and Medical Education and the Ministry of Science, Research, and Technology, Iran. We obtained the approval of the Ethics Review Committee of Shahrood University of Medical Sciences, Iran (code: IR.SHMU.REC.1399.017). The present study complies with contemporary laws and regulations in Iran.

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