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Demographic characteristics and risk actors of children and parents in child abuse subtypes: Findings from a psychosocial support department

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Abstract

Introduction: Child abuse remains a significant public health and social problem in developing countries. Studies on this subject could provide valuable information regarding the scope and nature of this phenomenon and its impact on public health. This study aimed to determine the demographic characteristics and risk factors of children and parents involved in subtypes of child abuse in a psychosocial support department.

Materials and Methods: This cross-sectional study was conducted in a pediatric hospital in Bandar Abbas, Iran from 2011 to 2013. The understudy population consisted of 519 child abuse cases that had been referred to psychosocial support departments for further investigations. Data regarding demographic characteristics and risk factors were collected using a questionnaire. Data analyzed through descriptive statistics, Logistic regression and SPSS software version 16.

Results: From the total, 315 (60.7%) were boys and 355 (68.4%) were under 6 years. A total of 152 (29.3%) parents had mental disorders. The most common type of abuse in children was neglect (77%). Physical abuse was more commonly done by working mothers. Study results also revealed that physical abuse was less prevalent among children of less educated mothers and fathers. Physical abuse was also more common among children of parents with mental disorders and single parent families.

Conclusion: This study showed that demographic characteristics of the child and parents and some related risk factors have a significant effect on child abuse subtypes.

Keywords: Child abuse, Demographic characteristics, Psychosocial support, Risk factor, Single-parent

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Introduction

Child abuse is a major cause of morbidity and mortality in all countries. It can be described as a failure to provide care and protection for children by the parents or other caregivers (1). There are different types of abuse such as, sexual abuse, physical abuse, emotional abuse, and neglect. The first two types more frequently co-occur in families with domestic violence and parental substance abuse (2).

Emotional abuse and neglect are usually under-recognized, but are actually common forms of child abuse (3). In the USA, child abuse is the second leading cause of death in children (4). The maltreatment of children in the UK today remains as a major social problem (5). The World Health Organization estimated that about 1,300 children die after being mistreated by their caregivers yearly across Europe and Central Asia (6).

One study reported that the prevalence of child abuse in Russia was about 28.9%. This Study was performed based on self-reported data from 375 early and mid-adolescent school children. Of these children, 3.8% suffered injuries that required medical attention (7). In a national survey in Turkey, from 1980 to 1982, frequency of child abuse and neglect was found to be higher in preschool ages. Among these children, 34.6% of girls and 32.5% of boys were victims of child abuse and neglect (8).

In various studies, several factors have been mentioned as the risk factors for child abuse by the parents or caregivers among which we can name low level of education, parents' young age, unemployment, mental disorders of the parents like depression, anxiety, and substance abuse, and also physical or mental debilitations in children (9-15).

One study in Iran showed the prevalence of physical abuse, emotional abuse, and neglect among adolescents in Tehran to be 17.5%, 49.46%, and 36.4 %, respectively. Analysis based on gender of children and also educational level and marital status of parents, revealed significant differences in frequency of child abuse (16). In another study Khooshabi et al. reported that the prevalence of physical abuse, neglect and emotional abuse in 2nd grade elementary school students in Tehran was 38.3%, 20.5%, and 62.5%, respectively (17). In this study, boys suffered more physical abuse in comparison with

girls, but, girls experienced more emotional abuse and neglect. Physical abuse was significantly more prevalent among working mothers. After Bam earthquake in 2003, Miri et al. reported that physical abuse was more common in children whose fathers were addicted, mothers were responsible for livelihoods, or had divorced parents (18). Also, fathers were more involved in physical abuse and neglect, whereas mothers were mostly responsible for emotional abuse.

In a study on 2nd grade elementary school students from 1998 to 1999 in Lorestan Province of Iran, Namdari et al. found physical child abuse to be significantly more prevalent in families with working mothers and unemployed fathers (19).

In this study, there was a meaningful correlation between educational level of parents and physical abuse but such correlation was not found for emotional abuse. For abused boys, the abusers were mostly parents, but for girls, the abusers were parents or child's male siblings. The birth order of the child had no significant effect on these findings.

Early detection of these children is critical in reducing the consequences of child abuse. Since detection of these cases is difficult, raising awareness and sensitizing the staff of the health care system can help early detection. The Department of Psychosocial Support in the Pediatric Hospital of Bandar Abbas has a protection system for quick detection of abused children and providing appropriate intervention for them and their parents.

In the present study, we collected data from this center to evaluate some of the demographic characteristics and risk factors involved in two subtypes of child abuse that were reported by hospital staff. Knowledge about these characteristics is essential for designing child abuse prevention interventions.

Materials and Methods

This cross-sectional study was conducted in a university-affiliated pediatric hospital in Bandar Abbas, Iran. The understudy population was selected from the outpatient clinics and inpatient wards from 2011 to 2013. Participation and inclusion in this study was based on the probable diagnosis of child abuse, made by the hospital staff. We defined child abuse as having the

diagnosis of physical abuse, sexual abuse, or neglect.

In this study, all the staff members of the hospital attended a training workshop to learn how to diagnose signs of child abuse. This workshop included an overview of signs and symptoms of child abuse and neglect.

Hospital staff was requested to refer any case of child abuse to the Psychosocial Support Department upon detection. This department includes a psychiatrist, a pediatrician, a psychologist and two social workers, examining the children.

The psychologist had sufficient experience in interviewing patients and had been trained for assessing the children and parents. She attended different workshops of identifying child abuse and neglect cases in order to be qualified to visit the cases.

The psychologist tried to communicate with the families in order to motivate them to attend future follow-ups. The psychologist filled out the questionnaires based on the data provided by the parents, children and their physical examinations.

In some cases, the child and parents were referred to a general or child psychiatrist. In this study the primary physician, who was mostly a pediatrician, was informed about further interventions. In the hospital, social workers coordinated the process of data collection. They explained the research process to the patients, obtained a written informed consent, and referred the subjects to the Department of Child Protection.

Research instrument

We used a questionnaire with three sections. The first part included some of the demographic characteristics of children and their parents such as sex, age, birth order, parents' educational level, occupational status, and also family structure.

The second part contained some items that are known as risk factors of child abuse such as parents' mental disorders including substance abuse and children's mental disorders. These risk factors were selected via literature review of previous similar studies (9-16,20). The third part questioned about the common signs and symptoms of child abuse; for instance, lacerations, fractures, burns, or ecchymosis.

Table 1. Demographic characteristics of children, their parents and types of child abuse

In this study, classification of the severity of physical abuse was as follows (21):

Mild: physical punishment beyond spanking, but without an object or fist and without marks or bruises.

Moderate: included abuse with the use of an object, contact with a fist, or contact resulting in marks or bruises but not requiring medical treatment.

Severe: referred to abuse that resulted in injuries requiring outpatient or hospital treatment.

Data were reported as mean \pm standard deviation (SD) or frequency and percentages. Differences in characteristics of participants and their parents based on the outcome variable (types of child abuse) were analyzed with independent t-test for continuous variables, and with the chi-square or Fisher's exact test for categorical variables.

All variables assumed to be associated with an outcome variable were analyzed using univariate logistic regression model and were then analyzed in a single model including all of them. In multivariate logistic regressions, only variables that maintained their association with the outcome measures were considered to have statistical significance.

Results were expressed as odds ratio (OR) and 95% confidence interval (CI). P-values less than 0.2 for univariate logistic regression and less than 0.05 for other tests were considered statistically significant. Data were analyzed using SPSS version 16.0.

Results

During the study, 520 child abuse cases were registered in a psychosocial support department of a general Pediatric hospital.

The most common type of abuse was neglect (76.5%). The second and third ones were physical (23.3%) and sexual abuse (0.2%), respectively. In further analyses due to the very few number of sexual abuse cases, authors decided to ignore this type of child abuse.

Participants	Variables		Frequency	Percent	
Children	Sex	Boy	315	60.7	
		Girl	204	39.3	
	Age	Under 3 years	169	32.6	
		3 to 6 years	186	35.8	
		6 to 12 years	122	23.5	
		Over 12	42	8.1	
	Birth order	1st	264	51.3	
		2 to 4	204	39.6	
		More than 4	47	9.1	
	Education	Pre-school	356	68.6	
		Elementary	121	23.3	
		High school	42	8.1	
	Psychiatric disorders	Healthy	375	72.3	
		ADHD	116	22.4	
		Depression	21	4.0	
		Addicted	7	1.3	
	Types of child abuse	Physical child abuse		121	23.3
		Neglect	Physical	384	74.0
			Medical	14	2.7
	Types of physical neglect	Contusion		101	26.4
		Burn		65	17.0
		Fracture		68	17.8
		Ecchymosis		7	1.8
		Laceration		36	9.4
		Poisoning		101	26.4
		Asphyxia		5	1.3
	Severity of physical abuse	Mild		90	74.4
		Moderate		23	19.0
		Severe		8	6.6
	Abuser (physical abuse)	Parents		100	82.6
Other families		15	12.4		
Others		6	5.0		
Mothers	Occupation	Employed	35	6.8	
		Housewife	478	93.2	
	Education	Illiterate	148	28.8	
		Elementary	222	43.3	
		High school	112	21.8	
		> High school	31	6.0	
	Mental disorders	Healthy	448	87.3	
Depression		49	9.6		
Anxiety		6	1.2		
Fathers	Occupation	Employed	472	93.3	
		Unemployed	34	6.7	
	Education	Illiterate	120	23.7	
		Elementary	237	46.8	
		High school	105	20.8	
		> High school	44	8.7	
	Mental disorders	Healthy	419	82.8	
Depression		20	4.0		
Anxiety		2	0.4		
	Addiction	65	12.8		

Subjects were in the age range of 3 days to 17 years (mean 4.76, SD=3.9) and 355 (68.4%) were under 6 years. Analysis based on birth order showed that more than half the victims (51.3%) were the first child (Table 1). From the total cases of physical abuse, 74.4%, 19.0%, and 6.6% were categorized as mild, moderate, and severe cases, respectively. Furthermore, among the neglect cases, physical neglect was the most common

type (92%); whereas, the educational neglect was the least common form (0.5%).

Of all children, 144 (27.7%) had mental disorders such as attention deficit hyperactivity disorder (ADHD), depression, and substance abuse (Table 1). Occupational status of parents was another factor that was analyzed in this study. In general, 93.3% of fathers and 6.8% of mothers were employed.

Table 2. Frequency of child abuse subtypes based on demographic factors

			Type of child abuse				P
			Physical child abuse		Neglect		
			Frequency	Percent	Frequency	Percent	
Children	Sex	Boys	78	24.8	237	75.2	NS
		Girls	43	21.1	161	78.9	
	Age	Under 3 years	25	14.8	144	85.2	NS
		3 to 6 years	53	28.5	133	71.5	
		6 to 12 years	32	26.2	90	73.8	
		Over 12	11	26.2	31	73.8	
		Mean ± SD	5.2 ± 3.5		4.6 ± 4.0		
	Birth order	1 st	72	27.3	192	72.7	NS
		2 nd to 4 th	42	20.6	162	79.4	
		More than 4 th	7	14.9	40	85.1	
	Education	Pre-school	78	21.9	278	78.1	NS
		Elementary	32	26.4	89	73.6	
		Higher	11	26.2	31	73.8	
	Psychiatric disorders	Healthy	76	20.3	299	79.7	NS
		ADHD	36	31.0	80	69.0	
		Depression	7	33.3	14	66.7	
Addicted		2	28.6	5	71.4		

The results demonstrated that the percent of child abuse subtypes, physical abuse and neglect, was different among children of employed and unemployed parents. Physical abuse was more common among children with employed mothers and unemployed fathers. The findings revealed that physical abuse was less prevalent in children with less educated mothers and fathers (Table 2).

Our study results demonstrated that 12.7% of the mothers and 17.2% of the fathers had mental disorders such as depression, anxiety, or substance abuse. In addition, the findings

demonstrated that physical abuse in children of parents with mental disorders was more common and this correlation in mothers was statistically significant. Among the physical abuse cases, parents were the main abuser in 82.6% of the cases, and in 12.4% of the cases family members were the predominant abusers. Analysis of injuries in physically neglected children showed that the most common type of injury was ecchymosis (26.3%). Analysis based on family structure demonstrated that physical abuse among the children of single-parent families

(32%) was more common compared to those with both parents (22.1%), but this difference was not

significant. Divorced, widowed, or separated parents were considered as single-parent.

Table 3. Association between predictor variables of parents and type of child abuse

Variables		Type of child abuse				Uni- variate	Multivariate		
		Physical child abuse		Neglect					
Mothers		Frequency	Percent	Frequency	Percent	P	P	OR	95% C.I. for OR
Occupation	Employed	15	42.9	20	57.1	0.004	0.426	Ref.	
	Housewife	104	21.8	374	78.2			1.41	0.61 – 3.26
Education	Illiterate	19	12.8	129	87.2	<0.001	0.016	Ref.	
	Elementary	44	19.8	178	80.2		0.044	2.17	1.02 – 4.62
	High school	43	38.3	69	61.7		0.002	4.14	1.71 – 10.02
	> High school	13	41.9	18	58.1		0.048	3.39	1.01 – 11.36
Psychiatric disorders	Healthy	91	20.1	361	79.9	<0.001	0.007	Ref.	
	Depression	21	42.9	28	57.1			2.32	1.26 – 4.26
	Anxiety	5	83.3	1	16.7				
	Addiction	3	30.0	7	70.0				
Fathers									
Occupation	Employed	110	23.3	362	76.7	>0.2	N.A		
	Unemployed	6	17.6	28	82.4				
Education	Illiterate	19	15.8	101	84.2	<0.001	0.243	Ref.	
	Elementary	43	18.1	194	81.9		0.223	0.63	0.31 – 1.33
	High school	36	34.3	69	65.7		0.984	0.99	0.41 – 2.40
	> High school	18	40.9	26	59.1		0.738	1.19	0.42 – 3.37
Psychiatric disorders	Healthy	95	29.3	324	70.7	>0.2	N.A		
	Depression	7	35.0	13	65.0				
	Anxiety	2	100	0	0				
	Addiction	21	32.3	44	67.7				

N.A: Not Applicable

To detect the most important influential factors on the type of abuse, first a univariate logistic regression analysis was carried out. Level of significance was set at $P < 0.2$ to ensure coverage of all important variables. The results showed that occupation, level of education and history of psychiatric disorders in mothers and level of education of fathers had significant effects on the type of child abuse. After determining the relatively effective factors ($P < 0.2$) using univariate logistic regression, all factors were entered in a multivariate logistic regression model to eliminate the effect of confounding factors. Using stepwise regression, the previous confounders and adjusted variables were specified (Table 3). The results of multivariate logistic regression revealed that mother's

occupation and father's level of education had no significant association with physical child abuse; but, level of education and history of psychiatric disorders in mothers had significant associations with physical child abuse. The OR of physical child abuse by mothers with elementary education was 2.17 times that of illiterate mothers (95% CI: 1.02-4.62). Also, the OR of physical child abuse by mothers with high school education was 4.14 times that of illiterate mothers (95% CI: 1.71-10.02). This rate was 3.39 for mothers with university education (95% CI: 1.01-11.36) (Table 3). Moreover, the OR of physical child abuse by mothers with positive history of psychiatric disorders was 2.32 times that of mothers with no such history (95% CI: 1.26-4.26).

Discussion

The most commonly reported type of abuse in this study was neglect (76.7%). This finding is in accord with the results of other researches (9,22,23). In two studies by Dubowitz et al. and Trocmé et al. the incidence of neglect was reported to be 65% and 40%, respectively. The location of psychosocial support unit in our study was in a general hospital; therefore, the reported abuse cases were mostly of physical type. The majority of understudy children suffered physical injuries due to the carelessness or neglect of their parents or caregivers and had been taken to the hospital. For this reason, other types of neglect were less recognized. In a study by Wendy and colleagues, the reported cases of neglect were usually due to the negligence or poor quality of care offered by the parents or caregivers (24).

In the majority of cases reported in the literature, physical abuse is often done by the parents (14,19,25). This study showed that in 82.6% of cases, parents were the main abusers (the fathers in 34.4%, both parents in 24% and the mothers in 24.2%). A study in Brazil revealed that in 23.8% the mother, in 12.7% the father and in 11.1% both parents were the abusers (26).

In the current study, more boys than girls were abused. This finding is in agreement with the results of other studies (27,28). Corby reported that parents often show aggressive behaviors like physical punishment to punish boys; whereas for girls, they usually prefer using less aggressive measures like rejection, humiliation, inattention or shouting (29). In the current study, higher rate of child abuse among boys may be due to the fact that 116 of these children were suffering from ADHD and incidence of this disorder in boys is generally 3-4 times greater than that in girls (30-32). This finding may suggest ADHD as a potential risk factor for physical child abuse by the parents. This point has also been mentioned by some other researchers (33,34). In a study in Turkey, 22.2% of child abuse cases had ADHD (8). Prevalence of hyperactivity, inattention, restlessness, and impulsive behaviors is high in these children, they have low tolerance and are not able to obey their parents' orders or follow the family rules. Abnormal behavior of these children often results in aggressive reactions and punishment by the parents (35-37). In response to such behaviors, parents usually use aggressive

and inappropriate forms of punishment. These parents are less likely to use encouragement; instead, they show negative reactions (38). They use physical punishment more frequently than parents of normal children, and this indicates the risk of child abuse since physical punishment is highly associated with physical abuse (39). In the current study, 32.6% of children were under 3 years of age. Farinatti reported that two thirds of abused children were below 3 years of age (26), while Chen et al. showed two thirds of children were under 2 years (24). Oppositional behaviors usually appear in children aged 18-22 months when the child starts to show off his/her independency (40). The problem particularly occurs when parents do not have the required skills to control such behaviors. They become angry and hurt the child (26,40). In our study, 51.3% of the referred children were the first child of the family. Child abuse in this group may be attributed to the lack of parental skills and not having the necessary knowledge and skills when the first child is born. This subject was also discussed by Elmer (41) and Namdari (19).

Our study also showed that mental disorder in parents, particularly mothers, was an important factor increasing the risk of child physical abuse. Substance abuse and depression can especially result in abusive behaviors with children (9,13,42,43). Children of substance abusers are two times more likely to be the subject of physical abuse (43). On the other hand, addicts are highly susceptible to depression and these two conditions are closely associated with each other (44). In the present study, these two factors namely addiction of the father and depression of the mother were two mental disorders that resulted in higher rate of physical abuse rather than neglect. This correlation in mothers was statistically significant. Depressed mothers showed higher prevalence of aggressive behaviors towards their children and showed more negative interaction with their children. They mostly preferred aggressive behaviors instead of argument or discussing the problem in order to control and handle their children's negative behaviors (45). Such mothers are often poorly capable of controlling their compulsive behaviors like rage and aggression (46) and usually do not have the skills to control their actions (47). In many studies, child abuse was

more prevalent among children of single parent families and it was considered as a risk factor for child abuse (24,48,49). In this study, physical abuse was more prevalent than neglect in single parent families but this difference was not statistically significant. This finding may be due to the small number of single parent families in our study, general attitude of parents towards physical punishment or high prevalence of physical punishment among most families.

In the majority of cases, we cannot draw a line and separate physical punishment from physical abuse. For example, in a study by Trickett and Susman, abuser families more commonly used physical punishment (50) and in another study by Ferrari, cultural differences were important influential factors in the prevalence of physical punishment by the parents (51). Chinese families are usually very aggressive with their children and believe that physical pain is necessary to appropriately train a child (52,53). Tang in his study showed that in Hong Kong physical punishment is customary and commonly used by the parents (54). Sayyari in his study in Iran showed that 12.2% of children presenting to the emergency departments of three pediatric hospitals in Tehran had been subjected to physical abuse (25). Many researchers demonstrated that low educational level of parents was a risk factor for abusive behavior with children (10,12,55). Parents' education can be a protective factor against their abusive behavior with their children because it can effectively enhance parents' knowledge and capability to efficiently interact with their children (10). In our study, most parents had low educational level. However, physical abuse was more common than neglect in educated parents and neglect was more common in parents with low level of education. This finding shows that such parents probably have adequate knowledge about the care that children need; but, apparently they are not well aware of the parents' management skills. Therefore, as the result, they may not be able to control their anger and physically punish their children. On the other hand, it seems that accepting physical punishment as a method of raising children greatly depends on the culture and attitude of a society and is related to the occurrence of child abuse (10,51,56,57). In some cases, even

educated mothers believe in physical punishment as an appropriate and effective method for training their children. Recognition of these behaviors and beliefs is especially important when studying child-parent interaction and the subject of child abuse in particular (58). Educating parents regarding the child-raising skills may be an efficient strategy to decrease the prevalence of physical abuse (59,60).

In the current study, there was no correlation between father's occupation and type of child abuse but, physical abuse was more common by employed mothers than housewives. The reason may be the fact that having two responsibilities (working outside the house and also working as a housewife at home) puts them under too much stress (61). Job stress can be associated with several psychological problems like anxiety, depression, emotional fatigue, irritability, indifference, aggressiveness, nervous breakdown, impulsive behavior, indecisiveness, poor concentration, and sensitivity to criticism (62,63). Stress decreases the tolerance level of mothers and triggers aggressive behaviors for child control (64,65). We were not able to contact and interview both parents in some cases for proper investigation of the case and this might have influenced the results. Also, our study participants were those who presented to the hospital for treatment of their physical conditions and these children comprise only a part of child abuse cases.

Therefore, we should be careful when generalizing the results to the society.

Psychosocial support and child protection department in a hospital may be an appropriate place to refer the child abuse cases. Special attention should be paid to child abuse phenomenon and its subtypes due to their complex consequences.

Conclusion

This study showed that demographic characteristics of the child and parents and some related risk factors have a significant effect on child abuse subtypes. Furthermore, investigations on this subject can enhance the knowledge about the nature of this phenomenon and its impact on public health.

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