Magnitude and Factors Associated with Child Abuse in a Mega City of Developing Country Pakistan

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Abstract

Objective: Child abuse is one of the major challenges for health care providers. This study was conducted to determine the burden of child abuse (physical & emotional) and the factors associated with it in an urban city of Pakistan.

Methods: This cross-sectional study was conducted in primary care clinics affiliated with a tertiary care hospital in Karachi, Pakistan between March to December 2010. Mothers with children aged between 6 and 12 years were included in the study. Those mothers' suffering from any acute illness like high grade fever, were excluded. A total of 412 mothers were recruited through consecutive sampling and written informed consent was taken. A pre-tested questionnaire was used to seek information about child abuse. Data was analyzed using SPSS version 19 and multivariable logistic regression was used to identify the factors (age, gender of child, family structure, educational status of parents, and mother's perception of her home environment) associated with child abuse.

Findings: Of the total 412 mothers, final analysis was conducted on 379 mothers. In all, 32.5% of children had been abused, 25.5% physically and 17.9% emotionally. Abuse was reported more among children whose mothers had minimal or no schooling (*P*=0.02), who were abused by their husbands (*P*<0.001), not satisfied with their marital life (*P*<0.001), and stressful home environment (*P*=0.02). In the multivariate analysis, the factors found to be independently associated with child abuse were mothers abused by their husbands (AOR=4.2; 95%CI: 2.2-7.9) and child being a girl (AOR=8.7; 95%CI: 4.5-16.8).

Conclusion: The prevention of child abuse can be achieved through comprehensive, multifaceted and integrated approaches requiring joint efforts by the government, policy makers, stake holders, social workers, educationists, and public health practitioners.

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Introduction

Child abuse has been recognized as a major medical and social problem worldwide. It affects children from all social, racial and religious groups. WHO defines child abuse and maltreatment as "all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment resulting in actual or potential harm to the child's health, survival, development

or dignity in the context of a relationship of responsibility, trust or power [1]. The spectrum of the extent of the problem thus ranges from fatal to non-fatal abuse which includes physical, sexual, emotional and psychological abuse and neglect. Consequences of child abuse and aggressive home environment are overwhelmingly disturbing due to the devastating short and long term adverse effects on the physical, mental and social well-being of children[2,3].

The prevalence of child abuse and neglect is difficult to measure since events tend to be un-reported. About 40 million children under the age of 14 years are estimated to suffer from abuse and neglect around the world[4]. Various population based surveys and cross sectional studies around the world have reported a very high proportion of children experiencing some form of physical maltreatment attributed to parental punishment or domestic violence[5]. In a cross sectional survey in Egypt, around 37% of children reported being beaten or tied up by their parents and nearly two-thirds of the parents in Republic of Korea confirmed whipping their children [5]. In Ethiopia, 21% of urban school and 64% of rural school children reported physical injuries from parental punishment[5].

Unfortunately, there is little evidence available on this issue from South Asia. In a study on street children from India, 36.6% were subjected to abuse[6]. Research conducted in Sri Lanka and Afghanistan also indicated high incidence of abuse in children [7]. Similar results are also documented in a recent study conducted in schools of three major cities of Pakistan[8].

There can be variety of reasons for inflicting abuse on children. Many models and theories have been developed to assess the probable causes of such behavior. One such model is environmental stress theory model which proposes that the child abuse results from social and environmental stress[9]. Stressful life conditions and home environment, including poverty, unemployment, lower educational status, nuclear family structure, are prominent factors of this model[9]. This perspective suggests that factors in the environment and family life that are stressful can facilitate violence or interfere with a parent's ability to care for children[9].

There is evidence that stressful home environment is significantly associated with child abuse[10,11,12]. Results of several studies revealed that witnessing and experiencing domestic violence is a major predictor of aggressive behavior in children[10,11]. The impact of witnessing violence in childhood extrapolates into adulthood with exhibition of hostile behavior publicly and towards spouse, thus giving rise to a perpetual *cycle* of violence and aggression[13].

Above factors indicate the importance of detecting and preventing child abuse. As there is limited information and awareness in Pakistan regarding this issue, we aimed to identify the magnitude of child abuse (physical and emotional) and the factors associated with it. In this study we have only focused on the physical and emotional abuse, due to the sensitivity of the issue as the responders may not be comfortable giving information regarding sexual abuse etc.

Subjects and Methods

Design and Setting:

This study was a cross-sectional study, conducted in primary care clinics affiliated with a tertiary care hospital in Karachi during March 2010 to December 2010.The study hospital has state of the art primary care unit, which also offers off-site medical services at different locations in the city of Karachi. These primary clinics were chosen to obtain a diverse sample representing various socio-economic strata and cultural patterns. Since patients visiting the primary clinics are un-booked therefore sampling frame could not be obtained and convenience sampling was employed.

Sampling and Enrollment:

Sample size was calculated through WHO software for sample size determination. The prevalence of child abuse in Pakistan is unknown, therefore a prevalence of 50% was used for maximum variance with 5% bound on error, and the sample size came out to be 385. The sample size was then inflated 7% for non-responders and the final sample size was approximately 412. Mothers with children aged between 6 and 12 years were eligible to be part of the study. Those mothers suffering from any acute illness like chest pain, acute abdominal pain, or high grade fever etc were

excluded. All eligible mothers visiting the primary clinics of the study hospital were consecutively recruited till the completion of the sample size (n=412).

Questionnaire:

A pre-tested and structured questionnaire was used to sought information on different sections such as socio-demographic characteristics, mother's perception about her home environment and violence against herself by the husband and violence against her children (physical and emotional) (between 6 to 12 years of age) by either parent during last 12 months. The time required to complete the questionnaire was about 25 to 30 minutes. The questions were listed from an extensive Medline search and opinion generated through consensus development technique by investigators of the study. In this study we have only focused on physical abuse. Moreover, to identify the factors we used some components of environmental stress model due to the sensitivity of the subject.

The factors included in the questionnaire were age, gender of child, family structure, educational status of parents and stressful environment at home. The questionnaire was piloted on 5% of the sample size, and any ambiguities found were removed. The study was reviewed and approved by the Institutional Research Ethics Committee.

Data Collection:

Four female medical students were trained for data collection. Only female students were selected because of the sensitive issue of violence and moreover in our socio-cultural context females are more comfortable to express their views openly with the same gender (female). The interviewers were specially taught to be neutral and not to share their personal feelings. Due to the sensitivity of the issue, the interviews were conducted with each participant in separate rooms ensuring full privacy. Moreover, personal identifiers were removed.

Statistical Analysis:

Data were analyzed using Statistical Package for Social Scientists (SPSS) version 19. The proportion of abused children reported by their mothers and other variables of interest (proportion of abuse, age, gender, educational status of parents, stressful home environment etc.) were calculated and chi-square test was used to assess association of various factors with child abuse. The independent association of studied factors with child abuse was calculated by multivariate logistic regression analysis. The factors included in the multivariable model were age, gender of child, educational status of parents, family structure and stressful home environment. The results were reported in form of adjusted odds ratio with 95% confidence intervals.

Table1: Demographic Characteristics of abused children (n=379)

|	Characteristics	Total distribution (%)	Child abused (%)	*P*-value
Age groups (in years)	16-29	25.3	32.3	<0.05
	30-39	27.4	31.3	
	40-49	28.8	43.1	
	50 and above	18.5	34.3	
Educational status of mothers	≥ 6 years of schooling	45.9	26.4	0.02
	0 – 5 years of schooling	54.1	37.6	
Educational status of fathers	≥ 6 years of schooling	58.5	29.1	1
	0 – 5 years of schooling	41.5	37.2	
Family system	Joint	36.7	29.7	0.9
	Nuclear	63.7	33.2	
Violence inflicted by father on mother	Yes	34.9	50.4	<0.001
	No	65.1	21.7	
Mother satisfied with her marital life	Yes	83.5	28.3	<0.001
	No	16.5	51.6	
Mother perceived home environment as stressful	Yes	27.7	41.3	0.02
	No	72.3	28.3	
Sex of child	Male	81.0	25.4	<0.001
	Female	19.0	62.5	
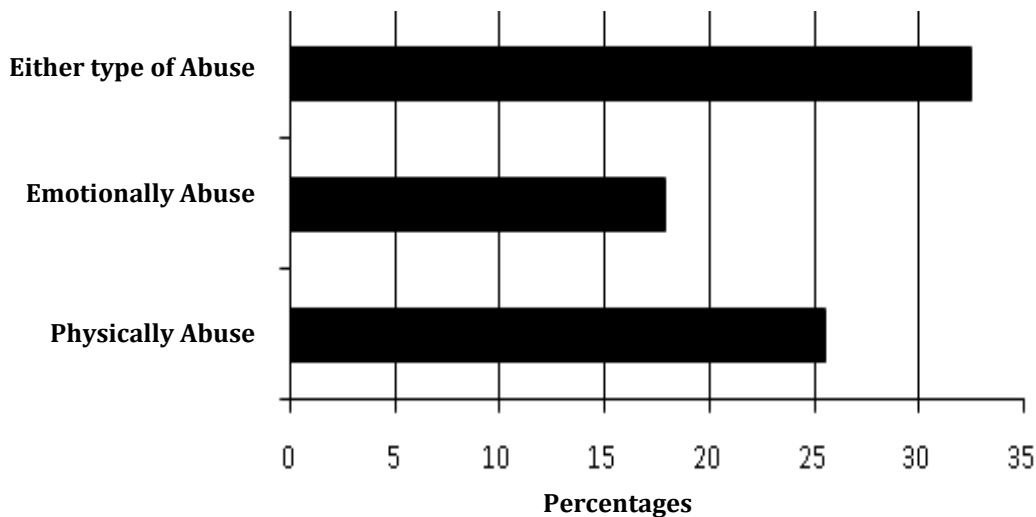
Fig. 1: Proportion and type of child abuse reported by mothers

Findings

Of the 412 consented participants, data of 379 mothers was analyzed while remaining 33questionnaires were excluded due to incomplete information. In all, about 25.3% of the mothers were aged between 16-29 years and 18.5% were more than 50 years of age. Over half of the responding mothers had received no or minimal schooling. Majority (63.7%) of the respondents were living in a nuclear family system. Over one-third of the participating mothers reported having been abused by their husbands and 27.7% perceived their home environment as stressful (Table 1). Almost one third of the mothers (32.5%; 95% CI: 27.7–37.2) reported some form of abuse experienced by their children. Over one quarter of children (25.5%; 95% CI: 21.2–30.0) were abused physically and about one-fifth of children (17.9%; 95% CI: 14.1–21.8) were abused emotionally (Fig 1). Unadjusted and adjusted odds ratios with their 95% confidence intervals for child abuse with background characteristics are summarized in Table 2. In univariate analysis, significant association of child abuse was found with no schooling or minimal schooling of mother (OR= 1.7; 95% CI: 1.1–2.6). Other factors that were significant include; mother being abused by father (OR= 3.7; 95% CI: 2.3–5.8), mother's perception of home environment being stressful (OR=1.8; 95% CI: 1.2–2.9) and abused child being a girl (OR= 4.9; 95% CI: 2.8–8.4). According to the environmental stress model, factors found to be independently associated with child abuse were mothers' being abused (stressful home environment) and child being a girl. Children whose mothers were abused by their fathers were four times more likely to be abused (AOR=4.2; 95% CI: 2.2–7.9) and for female child the likelihood of being abused is about nine times (AOR=8.7; 95% CI: 4.5–16.8), compared to a male child.

Discussion

Child abuse is one of the major public health concerns globally. In the study, approximately one third of the mothers reported some form of violence experienced by their children with about a quarter of children suffering physical abuse at the hands of their parents. Substantial quantitative estimates from Pakistan are lacking for a comparison; however the prevalence reported is comparable to other developing and neighboring countries[4].

The results of the current study reveal that female child was four times more prone to abuse as compared to male child. Despite the documentation of equal rights of men and women in the constitution of Pakistan and the various laws that provide protection of women[14]; gender inequalities in favor of the male gender are observed in all aspects of routine life including sex

Table 2: Factors associated with child abuse

Factor	Characteristics	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
Age in years	16-29	Ref	---
	30-39	0.9 (0.5-1.8)	
	40-49	1.6 (0.9-2.8)	
	50 and above	1.1 (0.6-2.1)	
Educational status of mothers	≥ 6 years of schooling	Ref	----
	0 – 5 years of schooling	1.7 (1.1 - 2.6)	
Educational status of fathers	≥ 6 years of schooling	Ref	----
	0 – 5 years of schooling	1.4 (0.9 - 2.2)	
Family system	Joint	Ref	-
	Nuclear	1.9 (0.9 - 2.3)	
Violence inflicted by father on mother	No	Ref	Ref
	Yes	3.7 (2.3 - 5.8)	4.2 (2.2 - 7.9)
Mother satisfied with her marital life	Yes	Ref	---
	No	2.7 (1.5 - 4.7)	
Mother's perceived home environment as stressful	No	Ref	----
	Yes	1.8 (1.2 - 2.9)	
Sex of children	Male	Ref	Ref
	Female	4.9 (2.8 - 8.4)	8.7 (4.5 - 16.8)

CI: Confidence interval

preference at birth, providing for basic necessities, education, health, empowerment and autonomy of decision making[15,16]. This is also reflected in the study results where maltreatment was found to be more common in girl child. Such gender based discriminations, driven by the cultural values that sons propagate a family name, are an economic advantage, providing social and economic security in times of need. The female child is taken as an economic liability on the family, has a low labor value and has to be provided with large dowries at the time of marriage, puts them at a greater risk of abuse and neglect[16].

Other significant covariates of child abuse were found to be the mothers having been abused by their husbands and their perception of home environment and marital life being stressful. Studies reveal that parents of children who had been the victims of abuse were more likely to be divorced or have an unhappy marriage[17,18]. Consistent with the previous studies[18,19], it appears that children of mothers who have been abused by their husbands, are at a greater risk of being abused.

With regard to the environmental stress model certain factors play a role in abuse of child[9]. Stress is an inevitable part of life and a certain amount of stress is normal, helps children develop

the skills they need to cope with potentially threatening situations throughout life[19]. In a stressful situation support from parents is necessary for children to learn how to respond to stress in a healthy manner[19].

Nevertheless, the results of this study are sufficient enough to conclude that a significant proportion of mothers visiting primary care clinics were experiencing some form of abuse[20]. It was identified that children of mothers who were themselves abused by their husbands were more vulnerable to maltreatment[20]. The Adverse Childhood Experiences (ACE) study conducted on 17,000 adults reported that a strong relationship was observed between abusing child physically by mother and being abused by husband[19]. Therefore, it is important to educate the parents to reduce the risk factors and enhance the protective factors that are associated with the perpetration of child maltreatment.

This study had some limitations, which should be considered before generalization. It was conducted in selected clinics of private sector situated in urban areas of a single city; hence the study participants may not represent the population at large. Owing to the cultural and social restrictions, we did not inquire about sexual abuse. Moreover, due to sensitivity of issues like

smoking, domestic violence and child abuse; there may have been under reporting of this information. We have asked about the abuse in last 12 months; therefore there is some possibility of recall bias. Therefore the actual problem of child abuse is probably even larger than findings suggest. In addition, we did not inquire about the socio-economic status in this study which may have assisted us in planning interventions for targeted groups. Moreover, the questionnaire used in this study was not validated.

Conclusion

In the light of the study findings, it is imperative that child abuse be considered as a matter of major public health concern which is preventable and therefore should be placed on the national agenda. The prevention of child abuse can be achieved through comprehensive, multifaceted and integrated approaches requiring joint efforts by the government, policy makers, stake holders, social workers, educationists, and public health practitioners. Primary care physicians being the first line doctors and health care providers should be well trained in screening for domestic violence and child abuse and providing care to the victims to prevent poor mental health outcomes. A supportive network should be established that offers friendly services. This requires capacity building of both the relevant authorities and professionals.

There is a need to enhance awareness of fathers, in particular about consequences of their abusive behaviors against their spouses on the development of their children. It is well known that childhood abuse of males is a strong predictor of perpetration of violence against intimate partners. Therefore, it is important to break the violence cycle of violence by addressing at the same time violence against children and women. Moreover, further studies on this issue are warranted to identify different factors (socioeconomic status etc.) associated with child abuse which will assist in developing future programs/policies for the same.

Authors' contributions:

N.S. Ali: conceived and designed the study and prepared the manuscript.
A.K. Khuwaja: initially analyzed, interpreted the data and contributed in writing of initial manuscript.
F.N. Ali: performed the literature search and assisted in first draft of manuscript writing.
K. Nanji: modified the analysis and contributed in the revision of the manuscript particularly in result and discussion section.
All authors read and approved the final manuscript.

Conflict of Interest: None

References

1. World Health Organization: 2008. Child maltreatment. Available at: http://www.who.int/topics/child_abuse/en. Access date: Dec 02, 2012.

2. McFarlane JM, Groff JY, O'Brien JA, et al. Behaviors of children who are exposed and not exposed to intimate partner violence: an analysis of 330 black, white, and Hispanic children. *Pediatrics* 203;112(3 Pt 1):e202- 7.

3. Tremblay RE, Nagin DS, Séguin JR, et al. Physical aggression during early childhood: trajectories and predictors. *Pediatrics* 2004: 114: e43-50.

4. World Health Organization 1999. Report of the Consultation on Child Abuse Prevention. Geneva: WHO, 1999. Available at: http://whqlibdoc.who.int/hq/1999/WHO_HSC_PVI 99.1.pdf. Access date: Dec 02, 2012.

5. Child Abuse and Neglect by Parents and Other Caregivers. In: Krug EG, Dahlberg LL, Mercy JA, et al. World Report on Violence and Health 2002. Geneva: World Health Organization. 2002; Pp: 59-86.

6. Mathur M, Rathore P, Mathur M. Incidence, type and intensity of abuse in street children in India. *Child Abuse Negl* 2009; 33(12):907-13.

7. Catani C, Schauer E, Neuner F. Beyond individual war trauma: domestic violence against children in Afghanistan and Sri Lanka. *J Marital Fam Ther* 2008; 34(2):165-76.

8. Khuwaja AK, Kadir MM. Child abuse among school going children in three major cities of Pakistan. Proceeding of International Conference of Urban Health, New York 2010.

9. Spaccarelli S. Stress, appraisal, and coping in child sexual abuse: A theoretical and empirical review. *Psychol bull* 1994;116(2):340-62.

10. Bauer NS, Herrenkohl TI, Lozano P, et al. Childhood bullying involvement and exposure to intimate partner violence. *Pediatrics* 2006;118(2):e235-42.

11. Frasier LD. Abusive head trauma in infants and young children: a unique contributor to developmental disabilities. *Pediatr Clin North Am* 2008;55(6):1269-85.

12. Greszta E. Family environment risk factors of depression in adolescence. *Psychiatr Pol* 2006; 40(4):719-30.

13. Catani C, Jacob N, Schauer E, et al. Family violence, war, and natural disasters: a study of the effect of extreme stress on children's mental health in Sri Lanka. *BMC Psychiatry* 2003;8:33.

14. Chang JJ, Theodore AD, Martin SL, et al. Psychological abuse between parents: associations with child maltreatment from a population-based sample. *Child Abuse Negl* 2008;32(8):819-29.

15. Abrahams N, Jewkes R, Laubscher R, et al. Intimate partner violence: prevalence and risk factors for men in Cape Town, South Africa. *Violence Vict*. 2006; 21(2):247-64.

16. The Constitution of Pakistan. Part II: Fundamental Rights. Article Nos. 25, 26, 27, 34, 35. Available at: http://www.pakistani.org/pakistan/constitution/ part2. Access date: Dec 02, 2012.

17. Ali TS, Khan N. Strategies and recommendations for prevention and control of domestic violence against women in Pakistan. *J Pak Med Assoc* 2007;57(1):27-32.

18. Taylor CA, Guterman NB, Lee SJ, et al. Intimate partner violence, maternal stress, nativity, and risk for maternal maltreatment of young children. *Am J Public Health* 2009;99(1):175-83.

19. Lupien SJ, McEwen BS, Gunnar MR, et al. Effects of stress throughout the lifespan on the brain, behaviour and cognition. *Nat Rev Neurosci* 2009; 10(6):434-45.

20. Banyard VL, Williams LM, Siegel JA. The long-term mental health consequences of child sexual abuse: An exploratory study of the impact of multiple traumas in a sample of women. *J Trauma Stress* 2001;14(4):697-715.