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# Nutritional status and physical abuse among the children involved in domestic labour in Karachi Pakistan: a cross-sectional survey.

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# Nutritional status and physical abuse among the children involved in domestic labour in Karachi Pakistan: a cross-sectional survey

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## Abstract

**Objectives:** To determine the prevalence of physical abuse among domestic child labours and to assess the nutritional status by calculating the Body Mass Index of children involved in domestic labour in Karachi.

**Methods:** A cross sectional study was conducted in the squatter settlements of Karachi. Questionnaire based interviews were conducted to capture physical abuse with 385 children who worked as domestic labour in the household of their employer. The ages of the children were between 10 to 14 years belonging to both genders. The children were enrolled in study by snow-ball sampling technique.

**Results:** The overall prevalence of physical abuse among domestic child labour in Karachi was found to be 8.3 %. Over 9 % had low weight and about 90% were stunted. This study also highlighted that 95% of the children involved in domestic labour perform overtime work in their employer's home, more than once per week.

**Conclusion:** There is high burden of physical abuse among the domestic child labour and these children are malnourished. There is a need to recognize and regulate this form of labour in Pakistan.

**Keywords:** Domestic, Child labor, Physical abuse, Malnutrition, Pakistan. (JPMA 66: 1243; 2016)

## Introduction

Child labour is existent almost as long as the history of mankind. It is a major cause of child abuse across the globe. There are 215 million children involved in labour worldwide and almost half of them are exposed to hazardous work.[1] Child labour is defined as "work which restricts or damages physical, emotional, intellectual, social or spiritual growth in children, and which denies their right to develop fully, to play or go to school."[2] It has also been defined as the work done by the child that exceeds the minimum number of hours according to the age and type of work. For children of age 12-14 years, at least 14 hours of economic activity or more than 28 hours/ week of domestic labour is considered as harmful for the child.[3] Poverty is one important determinant of child labour. The socio-economic factors responsible for the spreading and prevalence of child labour includes illiteracy, unemployment, lack of family planning, dissatisfaction for educational system, absence of social security mechanism and many more.[4]

Domestic child labour is emerging as a more prevalent form of child labour as children are more manageable than adult labour. They are cheap and flexible. Domestic child labour is now considered as a normal feature of society in low income countries.[5]

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It is one of the worst forms of child labour as they perform tasks in the home of the employer behind closed doors where the employer has full control over their lives. These children are subject to verbal, physical and sexual abuse. Physical violence against domestic child servant ranges from slap to severe beating using implements. WHO defines Physical abuse of a child as the intentional use of physical force against a child that results in or has a high likelihood of resulting in harm for the child's health, survival, development or dignity. This includes hitting, beating, kicking, shaking, biting, strangling, scalding, burning, poisoning and suffocating. Much physical violence against children in the home is inflicted with the object of punishing.[6]

Identification of this issue and its impact is essential because it can enable policy makers to design policies carefully in order to target the issue for eradication. This study aimed to improve our understanding about the prevalence of physical abuse among domestic child labour in Karachi Pakistan. We also assessed the nutritional status of these children by BMI and height-for-age calculation.

## Methodology

**Study Setting:** The study was conducted in Karachi. The city's population is currently growing at about 5% per year (mainly on account of rural-urban internal migration), including an estimated 45,000 migrant workers coming to the city every month from different parts of Pakistan.[7] According to the type of residence, Karachi can be divided into planned and unplanned areas. The unplanned area

comprises of non-permanent squatter settlements, where according to unofficial estimates 40 to 61 percent of the city's population is living.[8,9] The study was conducted in squatter settlements of Gulshan town of Karachi.

**Sample size:** Sample size was calculated by using WHO software. The prevalence of physical abuse ranges from 10-60%[10] therefore 50% was taken to obtain maximum sample size. The statistics of nutritional status of these children is not available therefore 50% was taken to obtain maximum sample size. With confidence level 95% and bound on error 5%, the sample size calculated was 385. This was the final sample size for our study.

**Sampling technique:** Non-probability snow ball sampling technique was adopted for identifying the study participants as data was not available about the participants. There were 46 squatter settlements in Gulshan town. We randomly selected 6 squatter settlements for the study. In each of the settlement we identified a key informant to spot the houses of domestic child labours in the community. After approaching the child involved in domestic labour, followed by the interview we measured height and weight of the child. That child was considered as a source to identify other child domestic labours living in neighborhood. And this technique of identification of child labour was continued throughout in order to achieve the desired sample size. When no new domestic child labours were identified by this technique in that squatter settlement then we moved to the other randomly selected squatter settlement and followed the same technique to enroll study participants.

## Operational Definition

**Child labour:** Child labour is defined as the employment of children less than 14 years of age, as the 1973 Constitution of Pakistan fixes the minimum age for admission to employment at 14 years.[11]

**Domestic child labour:** Domestic child labour is defined as children of ages between 10-14 years performing domestic household work at their employer's home.

**Physical abuse:** Physical abuse of a child is defined as the intentional use of physical force against a child. This includes slapping, hitting, beating, kicking, shaking, pushing, and pulling, biting, scalding and burning.

**Body Mass Index:** It was calculated by formula:

$$BMI = \text{Weight in kilogram} / (\text{height in meters})^2$$

Then BMI of each child was plotted on WHO Growth reference chart 5-19 years.[12] The following cut off points was used to assess the nutritional status:

< -3 SD = Severe Thinness

< -2 SD = Thinness

-1 SD - 1 SD = Normal

> 1 SD - < 2 SD = Over weight

> 2 SD = Obese

**Height for Age:** Height for Age was calculated by dividing the height (cm) of the child by the age in years. And then it was plotted on WHO Growth References Charts for children of age 5-19 years.[13] The following cut-offs were used:

>-3 SD = Severe stunting

>-2SD - < -3 SD = Moderate stunting

>-1 SD- -2 SD = Mild stunting

-1 SD- 1 SD= Normal

>1 SD- 2 SD= Mild tall

## Sample Selection

**Inclusion criteria:** We selected the children of ages 10-14years of either gender, resident of Gulshan town working as domestic servants for at least six months in the employer's home.

**Exclusion criteria:** We excluded those who did not give consent for participation.

The children were accompanied by parents and/or siblings during work. The children living at employer's home were also excluded.

**Study design:** This was a cross-sectional study design.

**Study period:** The duration of study was from May 2011 to October 2011.

**Data collection procedure:** The data was gathered by a questionnaire administered by trained data collectors. The questionnaire contained questions regarding socio-demography, work place environment, employer's characteristics and physical abuse by employer. It took 25 to 30 minutes to complete the questionnaire. The interview with the child was conducted in the presence of either the parent or guardian in a relatively isolated area within their home.

At the end of interview the weight and height of the child were measured using weighing scale and height meter. The BMI was calculated and plotted on WHO Growth reference chart (BMI) 5-19 years to assess the nutritional status of the child. The height for age was also calculated and plotted on WHO Growth reference chart (Height for Age) 5-19 years. The interviews were conducted at weekends and in the evening during week days when children were at their home.

The study received ethical approval from Ethical Review Committee of Aga Khan University Hospital Karachi. Written Informed consent was obtained from the parents/guardian of the child as well as informed consent of the child obtained on an assent form. The nature and purpose of the study was explained to participants in detail.

## Variables

**Independent Variable:** Age, gender, education, nature of work (cleaning and washing, buying grocery and babysitting), working hours of the child, age at which work was started, monthly income of the child and family, family size, parent's occupation and education, siblings education and occupation was taken as independent variables.

**Dependent/outcome Variable:** Nutritional status (BMI and height-for-age) and Physical abuse of the child by the employer and/or his family was taken as dependent variable.

**Data Analysis:** Mean with Standard Deviation was estimated for continuous variable like age and household size. Frequency (%) was calculated for categorical variables like physical abuse, different levels of BMI and stunting, gender, level of education and house hold income.

Stratification was done on the basis of gender, household income, level of education, duration of employment to see the effects of these variables on outcome. Univariate and multivariate analysis was done using logistic regression to determine the unadjusted and adjusted relationship between predictor variables and outcome (Physical abuse by employer). A p-value of <0.05 was considered as statistically significant.

## Results

Table-1 and 2 show the socio-demographic and family characteristics of children involved in domestic labour. The children belonged to low income and less educated families. The whole families were involved in labour and around 14% of the younger siblings were also labourers.

We also asked about the work place characteristics of the children involved in domestic labour. Over 50% of the children were working in more than 1 house and their main work was to do washing (laundry and dishes) and house cleaning. Around 4% were baby sitting. There was variation in number of daily working hours but 27% the children were working for more than 7 hours in a day. And almost all children (95.1%) reported working overtime at their employer's home.

We further asked about the work place environment of the children involved in domestic labour. The majority of the employers appreciated the child on doing a good job (99.2%),

**Table-1:** The socio-demographic characteristics of children involved in domestic labor (n=385) Karachi, Pakistan.

| Variables | Frequency | Percentages |
|---|---|---|
| Mean Age in years(SE) | 12.21 | 1.51 |
| **Gender** | | |
| Female | 364 | 94.5 |
| Male | 21 | 5.5 |
| **Level of education** | | |
| Illiterate | 279 | 72.5 |
| Primary (class 1-5) | 70 | 18.2 |
| Middle (class 6-8) | 1 | 0.3 |
| Informal | 35 | 9.1 |
| **Currently studying** | | |
| Yes | 23 | 6 |
| No | 362 | 94 |
| **Reasons of not studying (out of 362)** | | |
| Financial restrictions | 347 | 95.8 |
| Lack of interest | 10 | 2.76 |
| Family restrictions | 5 | 1.38 |
| **House hold income in Rs.** | | |
| Mean (SE) | 4703.9 | 3966.4 |
| **Age at starting work** | | |
| $\leq$ 5 years | 2 | 0.5 |
| 10-Jun | 259 | 67.2 |
| >10-14 | 124 | 32.3 |
| **Duration of work** | | |
| $\leq$1-3 years | 326 | 84.6 |
| 4-10 years | 59 | 15.4 |
| **Marital status** | | |
| Married | 378 | 98.2 |
| Unmarried | 7 | 1.8 |
| **Number of children** | | |
| 0 | 380 | 98.7 |
| 1 | 4 | 1 |
| 2 | 1 | 0.3 |

SE = Standard error.

offered them good meal at meal time (88.3%), and allowed them to use toilet (90.4%). Less than half of the employers allowed the child to take rest (49.6%). The common rest place was floor of the bedroom (42.9%), followed by lounge (26.17%), about 23.03% took rest in kitchen, 5.23 % in drawing room and even some (2.61%) in parking/ lawn. A small proportion of the children (21.3%) were allowed to study at work. Mainly the parents (64.4%) received child's salary whereas 33.5% of the children receive their own salary. Majority of the children (80%) had 1 day off /week, very few had 2 days off/ week however 18.2% of the children did not get any day off / week. Overall 32 children (8.3%) experienced physical abuse at workplace in last six months.

Table-3 shows the nutritional status of the children involved in domestic labour. According to the Body Mass Index calculation around one-third of the children had

**Table-2:** Frequency distribution of family characteristics of children involved in domestic labour (n= 385) Karachi, Pakistan.

| Variables | Frequency | Percentages |
|---|---|---|
| **Household members** | | |
| <4 | 68 | 17.7 |
| 7-May | 127 | 33 |
| 10-Aug | 108 | 28.1 |
| >10 | 82 | 21.3 |
| **Parents alive** | | |
| Both | 354 | 91.9 |
| Only father | 14 | 3.6 |
| Only mother | 16 | 4.2 |
| None alive | 1 | 0.3 |
| **Number of siblings** | | |
| Mean (SE) | 4.83 | 2.45 |
| **Father's occupation** | | |
| Labor | 329 | 85.5 |
| Govt employee | 3 | 0.8 |
| Private job | 8 | 2 |
| Businessman | 3 | 0.8 |
| Unemployed | 42 | 10.9 |
| **Father's education** | | |
| Illiterate | 337 | 87.5 |
| Primary | 26 | 6.8 |
| Middle | 7 | 1.8 |
| Matric | 6 | 1.6 |
| Informal | 9 | 2.3 |
| **Mother's occupation** | | |
| Home maker | 82 | 21.3 |
| Labour | 299 | 77.7 |
| Businesswoman | 4 | 1 |
| **Mother's education** | | |
| Illiterate | 371 | 96.4 |
| primary | 7 | 1.8 |
| Secondary | 0 | 0 |
| Intermediate | 2 | 0.5 |
| Informal | 5 | 1.3 |

SE = Standard error.

**Table-3:** Nutritional status of the children involved in domestic labor (n= 385) Karachi, Pakistan.

| Variables | Frequency | Percentages |
|---|---|---|
| **Body Mass Index** | | |
| Severe Thin | 5 | 1.3 |
| Thin | 31 | 8.1 |
| Normal | 260 | 67.5 |
| Overweight | 69 | 17.9 |
| Obese | 14 | 3.6 |
| Morbid obese | 6 | 1.6 |
| **Height for Age** | | |
| Normal | 37 | 9.6 |
| Mild stunting | 72 | 18.7 |
| Moderate stunting | 155 | 40.3 |
| Severe stunting | 121 | 31.4 |
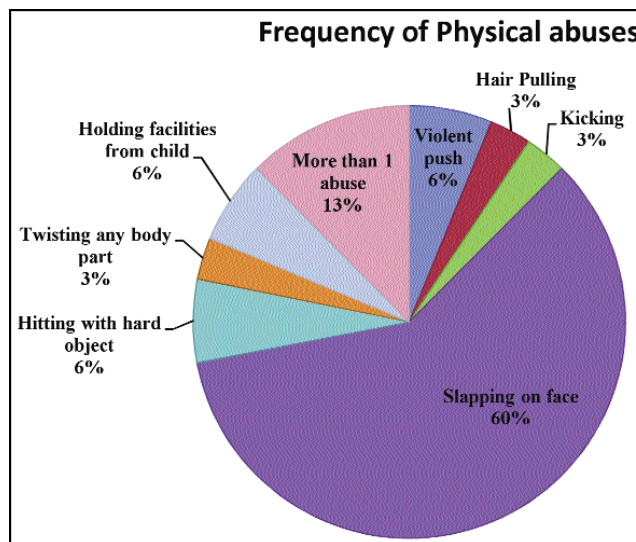


**Figure:** Frequency distribution of different types of physical abuses by the employers among the children involved in domestic labor Karachi, Pakistan.

abnormal BMI. But over 90% of the children were stunted with reference to height-for-age calculation.

Figure shows the frequency distribution of different forms of physical abuses faced by the children performing domestic labour at their workplace. Of the children who faced physical abuse, 60% experienced slapping on the face, 6% experienced hitting with hard object, 6 % experienced violent push, and 6% had restriction of the facilities as a form of punishment. The abused children experienced hair pull (3%), kicking (3%) and twisting of any body part (3%). And about 13% experienced more than one physical abuse.

## Discussion

This study was designed to determine the prevalence of physical abuse and nutritional status among the children performing domestic labour at the employer home in Karachi. Previously the studies have mostly focused on the underlying causes of overall child labour and the occupational exposures of the children at workplace.[14,15] There are very few studies conducted on domestic child labour and these studies have generally discussed the socio-demographic characteristics of these children like their parent's education and occupation, family income and household size and their work load. Our study is unique as we attempted to focus, along with the socio-demographic characteristics, primarily on their work place environment, their working conditions and experience of physical abuse at work place. We also tried to find their nutritional status by calculating their BMI and height for age. There is no such study in Pakistan which has focused on nutritional status of the domestic child labour along with prevalence of physical abuse.

The mean age of the children was 12.21±1.51 years. This is comparable to the studies conducted in other countries of South Asia.[16] We found the related pattern of involvement of girl child more in domestic labour as the literature from the other developing countries.[5] This is because in Pakistani society the woman of the employer's household deals with domestic servants. It is convenient to deal with a girl child and girls are easy to manage compared to boys.[17] We found that 72.5% of the children were unable to read and write and this is as well highlighted by UNICEF. Many of the children are sent out to work as early as 5 years of age; they get deprived of education, basic health and nutrition needs.[18]

These children enter the work force at quite young age to contribute to their family income, which results in less opportunity to obtain education and any technical skill.[19] They migrate from the rural to urban centres.[8] Their families have to earn more to survive in a large city and send some money back home for the rest of family.[14]

The reasons research participants quoted for not obtaining education were financial restriction, lack of interest and family reasons.

In our sample 2% of the children were married and had children. The married domestic child labours were girls. In developing world child marriages are common.[20] The early marriage has consequences on the child's physical and social well being as it deprives them from education and in attaining physical maturity.[21]

We also identified that majority of the fathers of children were labourer by profession and illiterate, and about 10% were unemployed. It has been documented that father's education and occupation has direct influence on the child's life.[22]

According to UNICEF,[3] for a child of age 12-14 years, more than 28 hours/ week of domestic labour is considered harmful but in our research we identified that 26.5% of the children were working more than 7 hours per day. Usually children start their work early in morning and work till dusk and they work in more than one home. In our study as well 52.5% of the children were working in more than 1 household. In Bangladesh 11.4% of the children were working more than 8 hours per day.[16] The average working time of children in Jordan was 9 hours daily and more than 60 hours per week.[23]

Children were generally satisfied with their work place environment. About 50% of the children were allowed to take rest in bedroom, lounge and kitchen at workplace. 90% of the children were allowed to use toilet facility during their work. Our finding of children allowed to rest during work hours is consistent with the results of a study conducted by University of Hull UK, they identified that domestic labour is considered as appropriate form of work for girls by the parents because of social restrictions for girls in the developing world and these girls are treated as part of employer's family.[24]

We also noticed that the prevalence of physical abuse by the employers during last six months was 8.3% among these domestic child servants. The result should be interpreted with caution as we conducted the interview with the child in presence of their parent or care giver. The child could feel hesitant in disclosing the physical abuse by the employer to the data collection team in front of their parents.[25]

In our study it is quite possible that BMI might be inflated because of the decreased height of the children. Height-for-age reflects the chronic picture of the nutritional deprivation of the child.

In analysis we found significant association between age and stunting. As the age of the child advances the more he/she got stunted. This might be explained as stunting results in chronic malnourishment and older children faced malnutrition longer than younger children and they were working for longer duration so it was more manifested in older children. This has been identified that duration of child labour is associated with nutritional status of the child.[14] The prevalence of stunting in our study is unique as compared to previous studies. None of the previous studies observed the nutritional status by measuring height for age.

Hadi et al identified that prevalence of physical abuse among child labours was positively associated with age; younger children were abused more frequently compared to older children, boys were abused more than girls and low level of education and unemployment of father was positively associated with physical abuse of the child at work place.[16]

## Limitations of the Study

Although we tried to avoid or control for factors that might limit the findings of this study, however, there are still some important limitations and the results of this study need to be interpreted in the light of these limitations with caution.

◆ Our aim was to assess the nutritional status of the working children. It was not aimed to see the association of the child labour with the nutritional status of the child. So while interpreting the results, it is required not to associate the effect of child labour on nutritional status of child.

◆ The prevalence was calculated on self reported physical abuse, it may have resulted in over or under-estimation of physical abuse.

◆ The data was collected for experiencing the physical abuse at workplace in last six months; recall bias could have affected our results.

◆ We excluded the children who were residing at

employer's home; this could have under-estimated our results. Because they were spending more time at workplace so their probability of being abused is greater.

◆ We interviewed the child in the presence of his/her parent or guardian. This might have affected our results as the child may not have been comfortable in disclosing the abuse in the presence of parents or vice versa.

◆ The data was collected at weekends and evenings during week days when children were at their home after work. This might have affected our results as children might be less interested to be interviewed during their rest or play time.

## Conclusion

This study highlights the burden of physical abuse and malnutrition among domestic child labour in Karachi. It adds significantly to scarce data from Pakistan on domestic child labour particularly their working conditions.

It is recommended to the policy makers and concerned authorities to recognized domestic child labour as a form of labour. There is a need to identify the burden of domestic child labour in Pakistan. So that their working conditions could be improved, their work time should be regulated and efforts should be made to provide them education and eradicate all forms of abuse at their workplaces.

**Disclosure:** None.

**Conflict of Interest:** None.

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