A STUDY TO ASSESS THE CHILD LABOUR PREVALENCE, RISK FACTORS AND MORBIDITY IN A POPULATION WORKING IN THE VEGETABLE AND FRUIT MARKETS OF HYDERABAD, A.P. DURING 2012-13

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ABSTRACT

Every child is a supremely important asset of the nation because future welfare of nation and society is entirely determined on how its children grow and develop. But child labour is the one which deprives the children all means. The markets are those who employ the children without any facilities. So far study was conducted to know the problems of these child labourers.

METHODS & MATERIALS

The present study was an analytical study done during 2012-2013, among the working children at vegetable and fruit markets of Greater Hyderabad, Andhra Pradesh with sample size of 200 from such major markets of 12. Selection of markets and study subjects were done by simple random sampling method. And data was gathered with pre-designed and pilot tested tool by conducting a medical camp in a weekday, in the market premises after taking the permission from the market yard chairman and consent of the child or parent to participate in the study. We gave medical treatment and also made suitable referrals if required.

RESULTS AND CONCLUSIONS

Present study shows the child labour prevalence rate as 22.79%. And it was high among male children. Gender discrimination was seen in school dropout rate and never attending school rate, which are the significant causes in female child to become a labourer. Scheduled caste, Scheduled tribes and Muslim children are more prone to child labour. Poverty was the leading cause of child labour in both the age groups (96.1%) followed by illiteracy, ignorance and bad habits of the parent(s).

RECOMMENDATIONS

Strict implementation of the child trafficking and child labour prevention act by labour department along with external agencies' supervision in urgent need. Along child welfare, family and female education and empowerment activities, below poverty line families' income generation schemes can reduce child labour.

KEYWORDS

Child Labour, Health Status, Morbidity, School Dropouts, Problem Families.

INTRODUCTION: Every child is a supremely important asset of the nation because future welfare of nation and society is entirely determined on how its children grow and develop. Child labour is recognised as a serious and enormously complex social problem in India. According to International Labour Organization (ILO), child labour is defined as "the work that deprives children of their childhood, their potential and their dignity and that is harmful to physical and mental development". It refers to work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work".[1]

The Census found an increase in the number of child labourers from 11.28 million in 1991 to 12.66 million in 2001 and 21.39 million in 2011 of 259.64 million children of 5-14 years. In addition, nearly 85 percent of child labourers in India are hard-to-reach, invisible and excluded, as they work largely in the unorganised sectors, but in Andhra Pradesh it decreased from 1661940 to 1363339 and Work Participation Rate (WPR) of children below 14 years was higher (7.7%) than that of the national average 5%.

With the advent of industrialisation and urbanisation, the social structure of our country has changed including agriculture. As a result, landless labourers and allied workers have flocked to industrial and urban occupation. In this economic process, child workers have been caught in both economic and social quagmires i.e. illiteracy, ignorance, age old social backwardness, poverty, landlessness, factions, floods, drought, etc. which have dragged the families in villages to cities in search of livelihood. Thus, competition at work rose. Hence employers started exploitation by giving low wages.[2] Because of high cost of living in cities, the all members of unprivileged families including children started working to meet their minimum needs in unhealthy and

substandard conditions at the cost of their health and development.[3] The Child Labour Act prohibits a child to work and The Factories Act defined that a child is one who has not crossed 14 years of age and adolescents who are between 15-18 years, It also prohibits the child to work and it permits the adolescent to work after certified by a qualified surgeon of their fitness to work but only between 7 a.m. to 6 p.m. [4] And the Labour Department is working in every state of India to prevent the child labour. Even then many children are found working in Hyderabad in different sectors. One among them was the vegetable and fruit markets where children are made to work under improper facilities (for taking rest, eating, washing and toilet), underpayment and exposing to dust, chemicals, etc., throughout the day. And so far no study was conducted in these markets to know the prevalence of the child labour, associated risk factors and related morbidities (health problems). Hence, we made an attempt so as to make necessary recommendations to higher authorities to take further action for overall welfare (physical, mental and social) of the child labourers by providing proper education and nutrition, health care services, etc., so as to produce healthy and educated and economically productive citizens thereby building the nation healthy and wealthy.

AIM AND OBJECTIVES:
1. To estimate the prevalence, and risk factors of child labour among vegetable markets' workers of Greater Hyderabad, Andhra Pradesh.
2. To assess impact of child labour on health status of child labourers.
3. To make recommendations for controlling, reducing and gradual elimination of health and socioeconomic problems of child labour.

MATERIAL AND METHODS:
Study Setting: Six major vegetable and fruit markets i.e. Gaddi annaram, Gudimalkapur, Kothapet, Mozamjahi, L.B. Nagar and Yerragadda were taken out of 12 big markets for the study by simple random sampling method (every 2nd market after numbering).

Study Period: The present study was conducted during 2012-2013.

Study Population: Children who are working for their family trade or for others trade, aged between 5-14 years, with or without wages irrespective of duration of work, type of work and the work which distracts him from leisure, play and education.

Sample Size Calculation: As we could not find exact child labour prevalence in any study, we used the morbidity prevalence which we got from the data collected routinely by our mobile medical clinic in our field practice area, department of community medicine i.e. 34% among school children. Based on this, we assumed that combined morbidity in working children will not be less than this. So

we used this prevalence for calculation of our study sample i.e. $4pq/L2=4x34x66/6.8x6. 8 =194.2$. Here L2 = allowable error 10%, and for ease of future analysis of data, we rounded it to 200.

Selection of Sample Population: Our study sample was selected by a simple random technique using a last digit of a rupee note i.e. every 2nd child is interviewed till we get our required sample in each market i.e. 33 or 35.

METHODOLOGY: After a sensitisation session for market committee members regarding the purpose of present study, we took consent for the study subjects, from employer/care taker/parents. Then, we conducted a medical camp in each market for the child labourers and screened them for morbidities and gave the treatment if needed referral also done for special care. Simultaneously, we also collected required data with predesigned, pilot tested questionnaire to every 2th child labour. The physical growth of the children also was estimated with Crown's weighing machine and with height measuring rod (Stand) after standardisation to 0.1 gram and 0.1 cm respectively. The required data of 35 child labourers from each market (i.e. of total 210) was collected with the help of a questionnaire tool and that data was entered in Microsoft Excel sheet for analysis. The results were presented as tables, graphs and chi-square statistical tests were applied to know the statistical significance between the variables at 95% confidence intervals. The results were discussed with the available studies. Lastly, relevant recommendations were made. Further openings and scope of this particular area of health in child labour were noted with limitations which appeared throughout the study.

LIMITATIONS OF THE STUDY: Limited resources restrained us not to interview the children who are working in the all (big or small) vegetable, fruit markets of Hyderabad. Hence, we cannot generalise the results to entire child labour working in these establishments.

RESULTS AND DISCUSSION: Hyderabad is a 5th biggest and one of the metro city of India with the population of more than one crore. It is the capital of Andhra Pradesh till 2nd June 2014. Hyderabad city is known for many markets and shopping complexes. Presently, Hyderabad is having many types of markets, some of them are vegetable and fruit markets. The big (major) vegetable markets work for more than 12 hours a day. These markets are giving employment to more than 150-250 labourers in each market including child labourers. Hyderabad has 12 major vegetable and fruit markets where children work for more than 8 hours a day without rest. They were found carrying, cleaning, vending, loading and unloading, etc. There is no medical facility, canteen, washrooms and rest area.

The present study estimated that the child labour prevalence in 6 major markets of Hyderabad was 22.79% i.e. about 356 children were found working out of 1562 labourers. We also observed that nearly 68.57% of the child

labourers were from Muslim religion, followed by 24.76% and 6.67% from Hindu and Other religions respectively. The child labour prevalence rates were observed as 40% highest among Muslim Indians, than Hindu Indians. Similarly results were observed by National sample survey organisation (NSSO).[5] And Scheduled castes and Tribes children had child labour prevalence of 2.8% and 3.8% which are nearer to the nationwide average of 2.74%.[6]

Nearly 71.42%, 25.71% and 2.86% of child labourers were from grade V (Ultra poor), Grade IV (Poor), and other socioeconomic (Grade I to III) classes[7] respectively. More than 66.67% of the child labourers were living in families with problems.[8]

A significant percentage of child labourers were found working for more than the stipulated time (beyond 7 a.m. and 6 p.m.) without proper relaxation in between the work. About 14.76% of the child labourers were found working for more than 12 hours/day.[9]

Age in years	Male	Female	Total
5-9	15(60.00%) (10.34%)	10(40.00%) (18.18%)	25(100) (11.90%)
10-14	130(70.27%) (89.66%)	55(29.73%) (81.82%)	185(100) (88.09%)
TOTAL	145(69.04%) (100)	65(30.96%) (100)	210(100) (100)
Table 1: Age and Gender wise Distribution of the Study Population			

Chi-square test (Yates corrected) x^2 = 0.65 (p>0.1).

The study observed that about 88.09% of the study population were in 10-14 years age group. And among the total study population, the male child labourers were higher than the female child labourers. It may be because society prefers female child for household work and gender discrimination in selection of occupation. [10]

Age group in years		Attending school (Full or part-time)	Drop out	Never attended school	Total (n=210)
5-9	Male	5(20%) (8.33%)	9(36%) (6.52%)	1(4%) (8.33%)	25(100) (11%)
	Female	3(12%) (5.0%)	4(16%) (2.89)	3(12%) (25%)	
10-15	Male	31 (51.67%)	27 (19.56%)	2 (16.66%)	185(100) (88.10%)
	Female	21(11.35%) (35%)	98(52.97%) (71.01%)	6(3.24%) (50.00%)	
Total		**60(28.57%)**	**138(65.71%)**	**12(5.71%)**	**210(100) (100)**
Table 2: Distribution of the Study Population as per their School going Status					

Chi-square test (Yates corrected) x^2 = 16.62 (p<0.0002).

About 73.90% (102/138) of the child labourers were school drop outs and they were females. Similarly, 75% (9/12) of the child labourers who never attended school also belong to female gender. Thus, our results were correlating with the 1991 census of GOI i.e. girls outnumber the boys with 51.5% child labour which was statistically significant. That means the gender discrimination is one of the cause for school dropout and to become a child labourer.[10]

Risk factors of child labour	5-9 years (n=25)	10-14 years (n=185)	Total (n= 210)
Poverty	24(96%)	178(96.21%)	202(96.19%) x^2 = 0.25(>0.3)NS
Ignorant parents	16(64%)	159(85.95%)	175(83.33%) x^2 = 6.13(p<0.0066)
Illiterate parents	20(80%)	164(88.64%)	184(87.61%) x^2 = 0.8(p>0.5)
Big family	1(4%)	15(8.10%)	16(7.61%) x^2 = (p>0.5)) NS
Broken family	10(40%)	57(30.81%)	67(31.90%) x^2 =0.09 (p>0.5) NS
Parental bad habit	9(36%)	159(85.95%)	187(89.04%) x^2= 31.39(p<0.0000001)
Parent-ill health/disability	6(24%)	52(28.10%)	58(27.61%) x^2 = 4.27(<0.01)
Gender bias	1(4%)	9(4.86%)	10(4.76%) x^2 = 0.09(p>0.5) NS
Advance taken	3(12%)	18(9.72%)	21(10.00%) x^2 = 0.08 (p>0.5)

Orphan	2(8%)	12(6.48%)	14(6.67%) $x^2 =0.02$ (($p>0.5$)
Indifferent child attitude	6(24%)	29(15.67%)	35(16.68%) $x^2 =6.53(p<0.005)$
Others/don't know	9(36%)	40(21.62%)	49(23.33%) $x^2 =1.76(p>0.5)$
Table 3: Age wise Distribution of Study Population as per their Risk factor for becoming a Child Labourer (Multiple answers) [7,11]			

In present study, we found that the poverty was the leading cause of child labourers in both the age groups (96%, 96.21%). But the observed difference among both the age groups is not significant. The second leading risk factor was illiterate parents (80%, 88.60%). And third common risk factor was parent's ignorance (64%, 85.65%). And its observed difference among both ages was significant ($p<0.006$). We also found some more significant risk factors such as Parent's bad habits ($p<0.0000001$), parent's ill health or disability (<0.01) and indifferent attitude of the child ($p<0.005$). The other concerning risk factors were broken family and "advance taken" from the employee.

Child complaint	Duration of child labour		Total (n= 210)
	6-12 months (n= 98)	**>12 months (n=112)**	
Head ache/body pains	41(41.83%)	80(71.42%)	121(57.61%) S $x^2=10.65(0.0003)$
Pain abdomen	16(16.32%)	62(33.51)	78(37.14%) S $x^2=33.62(0.0000001)$
Common cold	9(9.18%)	26(23.21%)	35(16.67%) S $x^2=6.43(0.005)$
Fever	2(2.04%)	6(5.35%)	8(3.81%) NS
Diarrheal/dysentery	15(15.31%)	18(%)	27(%) NS
Injury	6(6.12%)	17(15.17%)	23(10.95%) S $x^2=10.54(0.0005)$
Skin infection	23(23.46%)	52(46.42%)	75(35.71%) S $x^2=10.02(0.0004)$
Pediculosis	19(19.38%)	36(32.14%)	55(26.19%)NS
Ear discharge	2(2.04%)	6(5.35%)	8(3.8%) NS
Conjunctivitis	1(1.02%)	5(4.46%)	6(2.85%)NS
Urinary problems	12(12.24%)	43(38.39%)	55(26.19%)S $x^2=17.16(0.00001)$
Caries tooth (Tooth ache)	85(86.73%)	97(%)	182(%)NS
Others	27(27.55%)	35(31.25%)	62(29.52%)
Table 4: Age wise Distribution of Study Population as per their Health Problems at the time of the Study			

On the day of interview, the 5 topmost complaints made by the working children were Dental caries, Headache/body pains, Pain abdomen, Skin infection, and Urinary problems and with 85.71, 57.61%, 37.14%, 35.71% and 26.19% respectively. Here, we observed that as the period of work increased the health complaints also increased.[12]

Micro-nutrient deficiency sign	Duration of child labour		Total (n= 210)
	6-12 months (n= 98)	**>12 months (n=112)**	
Pallor (Fe+)	86(87.75%)	102(91.07%)	188(89.52%) $*x^2 =0.31(p>0.8)NS$
Angular stomatitis, glossitis or cheilitis (B-complex)	15(15.30%)	24(21.42%)	39(15.11%) $*x^2 = 0.92(p>0.16)$ NS
Bitot's spots (vitamin A)	2(2.0%)	2(1.7%)	4(1.9%)
Gingivitis (vitamin C)	1(1.02%)	4(3.5%)	5(2.38%)
Goitre (Iodine)	0	1(0.8%)	1(0.47%)

			65(30.95%) *x^2 = 3.9(p<0.02) Significant
Dental fluorosis	29(29.59%)	49(32.14%)	
Others (Ca+,zinc, vit 'D', 'E etc')	20(20.40%)	29(25.86 %%)	49(23.33%)

Table 5: Duration of Child Labour and their Micronutrient Deficiency

*x^2 = Chi-square test (Yates corrected).

The study showed that as number of years of work by the child labour increased, the micronutrient deficiency also increased. The highest prevalence of iron deficiency was seen (89%), whereas the next highest was dental fluorosis (30.95%). And there was a significant difference in both groups (p<0.02).

Grading of malnutrition	5-9 years (n=25)	10-14 years (n=185)	Total (n= 210)
Obesity	1(4%)	4(2.16%)	5(1.4%)
Normal	11(44%)	62(33.51%)	73(34.76%)
Grade I	10(40%)	101(54.59%)	111(52.85%)
Grade II	2(8%)	15(8.10%)	17(8.09%)
Grade III	1(4%)	3(1.62%)	4(1.90%)

Table 6: Age wise Distribution and Grading of Malnutrition[13]

Chi-square test (Yates corrected) x^2 = 2.55 (p>0.63).

Our study revealed that nearly 1.9% of the children were suffering from severe grade malnutrition and 1.4% of them are obese. And about 52.85% are having grade I malnutrition. The observed difference between two age groups was statistically significant.

CONCLUSIONS
1. The Child labour prevalence rate in Hyderabad major vegetable and fruit markets was 22.79%. And most of them were in 10-14 years age group.
2. The male child labourers were higher than the female child labourers in these markets.
3. Most of the female child labourers were school dropouts or they never attended school. It indicates female child discrimination.
4. Highest child labour prevalence was observed in Muslims (68.57%), followed by Hindus (24.76%).
5. Poverty and illiteracy were the leading causes of child labour especially among SC and ST children (81%) than the other castes.
6. The most common risk factor of child labour was poverty, followed by parental bad habits, illiteracy of the parents, family problems, broken family and parental ill health or disability.
7. Five topmost complaints made by the working children were pediculosis, pain abdomen, common cold, headache/body pains and injuries.
8. As per our study, about 2% and 52.85% of them were suffering with severe grade and grade I malnutrition respectively.

RECOMMENDATIONS:
1. Increased female child education and empowerment opportunities can decrease child labour.
2. Child attitude problems can be corrected by timely and appropriate behaviour therapy at Child guidance clinics if not at Foster homes for shaping their future.
3. Free provision of skill imparting facilities including hand loan under Rajiv Gandhi Swavalamban Yojana (RGSY) to Scheduled Caste, Scheduled Tribe, Muslim and Hindu and below poverty line (BPL) families to alleviate the poverty.
4. Concerned Municipal or Panchayath level Sarpanch/ Accredited social activist /Anganwadi worker and MPHW(F) should identify the children who are vulnerable and act appropriately.
5. If parents are sick/disabled, the local MPHA (F) or (M) of urban health center should report to the medical officer who will treat or arrange for a referral service.
6. Strict implementation of Child Labour Prohibition and Regulation Act (1986), Indian Factories Act (1948) etc. to protect the child's fundamental rights of article 24.
7. Labour Department Authorities should identify all the establishments which employ children to rescue the children and to take appropriate measures for preventing the child labour.

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