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Article

Urban Child Labour in Bangladesh: Determinants and It's Possible Impacts on Health and Education

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Abstract: 1) Background: A significant proportion of child laborers are compelled to work in exploitative environments, experience both deteriorating health and financial loss. The present study sought to determine the factors affecting child labour and the characteristics of their working environment. **2) Methods:** A questionnaire survey was conducted with 80 child labourers aged 5 to 17 years. Alongside descriptive statistics, a newly devised technique known as Influencing Causes Index (ICI) was administered and tested. **3) Results:** The startling demographic findings reveal that peak share of child labourers are young children (12-14 years) and 32.5% child laborers had never attended school. The thorough assessment of determinants reflects that not only poverty, but schooling expenses and lack of access opportunity to primary schools are also the top-ranked push factors to trigger children towards labour. Around 72.5% of children work for over 8 hours a day. A significant proportion of participants received no leave, training, or access to hygiene facilities. The existing pattern of employment and working conditions resulted in musculoskeletal pain and dermatological infections among child labourers ($p<0.05$). **4) Conclusion:** This research suggests that income measures for households, and an education programme for both children and parents would expedite the abolition of child labour.

Keywords: Child labor, Working conditions, Poverty, Schooling, Bangladesh

1. Introduction

Child labour is a major social and public health conundrum in many developing countries. Despite increasing research over the last two decades into the detrimental impacts of child labour, it remains a significant concern globally. The International Labour Organization (ILO) has not been able to meet its goal of eradicating child labour (Bourdillon & Carothers 2019), with recent data suggesting over 152 million children are engaged in paid work (ILO 2018). The prevalence of child labour in low-income countries of Asia and Africa continues to escalate. Asia has an estimated 122 million children aged between 5 to 14 years, who are compelled to work for their survival (ILO 2019). There is a discrepancy in regard to the definition of child labour. Child work generally consider light work which is not likely to impair physical or cognitive development, while child labour is detrimental for the child's physical and psychological development and denies children their rights (Wright 2003). Based on age and working hour parameters, the Statistical Information and Monitoring Programme on Child Labour (SIMPOC) provides a more specific definition of child labourer as an

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economically active child under 12 years who works one or more hours per week, an economically active child 14 years or under who works at least 14 hours or more per week in activities that are "hazardous by nature or circumstance," and a child 17 years and under who works in an "unconditional worst form of child labor" (trafficked children, children in bondage or forced labor, armed conflict, prostitution, pornography, illicit activities) (Edmonds 2008, p. 3618). According to the Bangladesh Bureau of Statistics (2013), a child between the ages of 5-11 years who is working for any period of time in a non-hazardous job is a child labourer and 12-17 years old, who works for more than 42 hours a week in non-hazardous job is a child labourer.

1.1 Child labour in Bangladesh

The GDP growth rate of Bangladesh has been increasing and peaked at 7.90% in 2019 which is a higher rate than many other developing country (Trading Economics 2019). Despite moderate advancements in efforts of eliminating child labour, 4.3% (1,326,411) of all children are still child labourers in Bangladesh, with the majority (39.7%) employed in the agriculture sector (Bureau of International Labour Affairs 2018). The National Child Labour Survey 2013 estimated that there are 3.45 million working children in Bangladesh aged between 5 to 17 years, of which 2.47 million live in rural areas, 0.57 million in urban area and 0.43 are in city corporation areas. More males (2.10 million) are child labourers with female numbers estimated to be 1.35 million. The agriculture sector employs 36.9% of working children, which has the highest rates of all sectors in Bangladesh followed by 27.3% in the manufacturing sector (Bangladesh Bureau of Statistics 2013). A significant proportion of children in the industrial sector work as long as 16 hours a day undertaking duty such as carrying heavy loads, using hazardous machinery, and handling chemicals without safety measures (Bangladesh Labour Welfare Foundation 2016). Children in the manufacturing and service sectors of Bangladesh may work on average 43 hours per week, whereas children in the agricultural sectors work fewer hours (Norpoth et al. 2014).

Of note, Bangladesh has ratified the ILO's Worst Forms of Child Labour Convention (C182) and UN Convention on the Rights of the Child. The country has initiated several steps to eliminate child labour including incorporating article number 34 into "The Constitution of Bangladesh", "The Children Act 2013" and passed Labour Laws in 2006, which set the minimum legal age for employment at 14 (Beaubien 7 December 2016). Despite this, implementation of these initiatives is weak.

1.2 Determinants of child labour

To combat or eliminate the pervasive prevalence of child labour from developing countries, systematic evaluation of factors responsible need to be identified. Most research on child labour concentrates on single indicators. For instance, a plethora of research repeatedly assigns poverty or economic crises as a major cause of child labour (Bourdillon & Carothers 2019; Martin 2013; Fors 2012). Additionally, a study conducted by Edmonds (2003) revealed that 92% of working children in Nepal and 87% in Vietnam work in family farms to assist parents, as parents prefer their children to work within their household. Evidently, poor socio-economic status measured by occupation, education and income often leads children into labour. Key socio-economic determinants comprise economic crisis or poverty (Bourdillon & Carothers 2019), low living standards, and the high cost of schooling (Barman 2011). A study by Togunde and Carter (2006) revealed that children of parents

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with superior socioeconomic status work fewer hours. Additionally, child labour increases because of gender disparity, low parental education (Ali & Arabsheiban 2017), large family size, and rural residencies (Patrinos & Psacharapoulos 1997). Traditional societal norms, cultural beliefs or customs are also contributing factors to child labour (Adonteng-Kissi 2018). Child labour also exists where there are labour intensive production techniques and industries. This suggest that the mode of production and the structure of the labour market are tacitly responsible for this problem (Fors 2012). Outwardly, a failure to enforce labour laws along with the weakness of state intervention restricts the elimination of child labour (Martin 2013).

1.3 Hazardous working environment

Child labour is not just a health or economic concern, but an issue of human rights. Child labourers are known to be vulnerable to harmful workplace exposure and injuries, mostly because of their working environment. Hazardous occupations include construction, domestic and small-scale industries (Cooper & Rothstein 1995). The ILO estimates 73 million of child labourers are engaged in hazardous type of works, with 71% labour in agriculture (ILO 2018), which are considered the worst forms of child labour. Working in hazardous environments exposes children to dangerous substances, agents, or processes, high or low temperatures, high noise levels, and vibrations damaging their health and well-being. The ILO estimates that health problems such as musculoskeletal damage arising from carrying heavy loads; lung disease from exposure to dusts; cancers and reproductive disorders due to exposure to pesticides, insecticides and industrial chemicals, occur each year, with 22000 children killed at work (ILO 2011). A study performed by the London-based Overseas Development Institute found that child labourers in Bangladesh as young as 6 years old worked full-time, while others are employed up to 100 to 110 hours per week in hazardous activities and on average earn less than 2 US dollar a day (Beaubien December 7, 2016). The UN committee on the Rights of the Child noted that children in Bangladesh work in five of the worst activities, namely welding, auto workshops, battery recharging, road transport, and tobacco factories (Norpoth et al. 2014). The Bangladesh Labour Force Survey, 2000 reported that many children working in hazardous sectors of Bangladesh such as construction, manufacturing and at the household level work more than 40 hours a week and in general 26 hours a week (Salmon 2005). Children working in the mining and agriculture sectors of Bangladesh are more susceptible to the risk of damaging their health and well-being. Children working in the agricultural sector are often exposed to fertilizers, pesticides, and herbicides. Specific agricultural crops, such as tobacco pose a direct health risks to children through exposure to nicotine from tobacco leaves (Amon et al. 2012). Regrettably, Work, Health and Safety (WHS) induction training for the child or young employees within the workplace is unusual in many developing countries like Bangladesh. No studies were found in the context of developing countries that indicated that child labourers are provided with education in work, health, and safety provisions.

1.4 Key Justification of this study

Child labour continues to be a significant public health concern in many low- and middle-income countries. However, the area is still under-researched. The major hindrance of child labour research is the limited availability of recent and reliable official data to effectively address the nature and extent of child labour. The evidence of adverse health consequences of child labour in the context

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of developing countries is limited (Ahmed & Ray 2014). A report of ILO (2018) stated that legislation cannot eliminate it alone, what is required is effective economic measures that will provide protective action. This statement points to the necessity for more studies on child labour in order to design effective policy measures. In Bangladesh, poverty rates have declined to 9% in 2018. Around 12.9% of population live below the poverty line and the country is now the 44th largest world economy in nominal terms of GDP (The World Bank 24 October 2017). Despite this economic progression, the prevalence of child labourers in Bangladesh is still rampant, stated above. This suggests that there are other risk factors and the present research aims to focus on exploring these factors.

In metropolitan areas of Bangladesh, many child workers are engaged in the informal sector. The informal sector lies outside the jurisdiction of government laws or legislation (Alam et al. 2015). With the existing legal protection concerning child labour limited, and child labour policies or laws outdated, the capacity to enforce laws is difficult. The debate between child labour and labour standards in Bangladesh has prevailed for several years with all the players protecting their own interests (Wright 2003). In order to reform and revise existing policies regarding elimination of child labour, up to date research is necessary.

1.5 Objectives of the study

This study was carried out to assess the determinants of child labour and the nature of the child's working environment. This objective was further divided into three research sub-aims,

i. To detect the socio-demographic characteristics of child labourers.
ii. To explore the causes of being child labourer.
iii. To analyse the nature of the employment and working environment of child labourers.

2. Results

2.1 Socio-demographic characteristics of child labourers

Table 1 indicates the frequency distribution of different socio-demographic attributes of child labourers. The study shows that 61.25% of children aged between 12 to 14 years were engaged in labour, while only 6.25% fall within the age group of 5-7 years. The largest share 60% had attended primary level school, whereas 32.5% of the child labourers had never attended school. Approximately, 16.25% and 13.75% were employed as rickshaw pullers or in agricultural activities respectively, and 25% were employed in welding workshops or in retail. In addition, 88.75% came from nuclear families and in 66.25% of cases their father was the family head. A large share of child labourers (60%) lived in rental accommodation. Despite households having two other individuals in work, 47.5% of children were forced to seek paid employment.

This cross-sectional study revealed that fathers of 57 respondents and mothers of 62 respondents had no formal educational qualifications. Approximately, 20%, 15% and 12.75% of child labourers disclosed that their fathers were engaged in day labour, agriculture, and small-scale business respectively, while 13.75% were unemployed. Up to 66.25% of the mothers of child labourers were housewives.

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Table1 Socio-economic Information of Child Laborers

Characteristics		n (%)
Age	5-7	5 (6.25)
	8-11	13 (16.25)
	12-14	49 (61.25)
	15-17	13 (16.25)
Marital Status	Married	5 (6.25)
	Unmarried	75 (93.75)
Education	Up to Primary	48 (60)
	Up to Secondary	6 (7.5)
	No Educational Qualification	26 (32.5)
Occupation	Agriculture	11 (13.75)
	Electronic/Mechanic Worker	8 (10)
	Welding Worker	10 (12.5)
	Hotel/Restaurant Worker	5 (6.25)
	Tempo Helper	5 (6.25)
	Automobile Helper	7 (8.75)
	Salesperson	10 (12.5)
	Rickshaw Puller	13 (16.25)
	Construction Worker	8 (10)
	Others	3 (3.75)
Family Size	Nuclear	71 (88.75)
	Extended	9 (11.25)
Family Head	Father	53 (66.25)
	Mother	20 (25)
	Brother	7 (8.75)
	Sister	0 (0)
Housing Pattern	Own house	27 (33.75)
	Rented house	48 (60)
	No house	5 (6.25)
Earning Member of Family	One	6 (7.5)
	Two	38 (47.5)
	Three	28 (35)
	More than three	8 (10)
Positive Relationship with Parents	Yes	74 (92.5)
	No	6 (7.5)
Father's Educational Qualification	Primary	19 (23.75)
	Secondary	4 (5)

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	No educational qualification	57 (71.25)
Mother's Educational Qualification	Primary	16 (20)
	Secondary	2 (2.5)
	No educational qualification	62 (77.5)
Father's Occupation	Day Labourer	16 (20.00)
	Rickshaw Puller	9 (11.25)
	Fisherman	3 (3.75)
	Business	10 (12.50)
	Agriculture	12 (15)
	Carpenter	3 (3.75)
	Guard men	2 (2.50)
	Welding Worker	3 (3.75)
	Tempo Helper	2 (2.50)
	Driver	6 (7.50)
	Others	3 (3.75)
	Unemployed	11 (13.75)
Mother's Occupation	Only Housewife	53 (66.25)
	Domestic Labourer	18 (22.5)
	Others	9 (11.25)

2.2 Causes of being child labourer

The preliminary identified determinants of child labour are poverty, parental unemployment, low aspirations of parents, uneducated family members, trouble at home, parental debt, the high cost of education, poor schooling opportunities, the high demand for unskilled and cheap labour, urban migration, natural calamity, and early marriage. These identified characteristics were determined from previous research in order of importance. ICI measure was used to detect their ranking order as to cause of child labour.

Table 2.1 illustrates the mean value of four response categories (No, Little, High, and Very high) for each influencing cause of child labour. For instance, in the case of 'poverty', the mean value for the 'No' response category was 0% followed by 2.5% for 'Little', 27.5% for 'High' and 70.0% for 'Very high' influencing causes of child labour. In this manner, the percentage (%) for the remaining categories for each variable were computed. The chi-square test statistics revealed that there were significant differences among the response categories of every possible determinates of child labour ($P<0.01$) with an exception of categories involved in the "trouble at home".

Table 2.2 indicates the calculated rank values for the 13 identified causes of child labour through using the ICI equation. Table 2.2 illustrates that 'Poverty' is ranked first (ICI Score: 267.50) among the 13 recognized causes based on ICI values. 'High cost of education' is ranked in second order in the ICI ranking measure (ICI score: 250). Correspondingly, 'Poor schooling opportunity' is positioned in the third-ranking order, with an ICI score of 232.6 followed by 'Uneducated family

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members', 'Unemployment condition of family members', 'High demand of unskilled and cheap labour', 'Urban migration', 'Low aspiration of parents', 'Trouble/conflicts at home', 'Parents under heavy debt', 'Natural calamity', 'Others' and 'Early marriage' were ranked in 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th and 13th order respectively as influencing causes of child labour. The Friedman Test shows the parallel mean rank order of child labour indicators similar to the ICI measure, which reflects the reliability of the ICI measure. Of note, the Friedman chi-square test represents that there is an overall significant difference among the mean ranks of related variables ($p<0.001$).

Table 2.1 Categorization of the responses according to the roots of being child laborers

Item	Response categories	Percentage of responses	P value
Poverty	No	0.00	.000*
	Little	2.5	
	High	27.5	
	Very high	70.0	
Unemployment condition of family members	No	1.3	.000*
	Little	15.0	
	High	73.8	
	Very high	10.0	
Low aspirations of parents	No	10.0	.000*
	Little	41.3	
	High	33.8	
	Very high	15.0	
Uneducated family members	No	1.3	.000*
	Little	7.5	
	High	57.5	
	Very high	33.8	
Trouble at home	No	23.8	0.072
	Little	33.8	
	High	28.7	
	Very high	13.8	
Parents under heavy debt	No	50.0	.000*
	Little	13.8	
	High	15.0	
	Very high	21.3	
High cost of education	No	2.5	.000*
	Little	5.0	
	High	32.5	
	Very high	60.0	
Poor schooling opportunity	No	1.3	.000*
	Little	7.5	
	High	48.8	

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	Very high	42.5	
Huge demand of unskilled and cheap labor	No	3.8	.000*
	Little	31.3	
	High	47.5	
	Very high	17.5	
Urban migration	No	32.5	.000*
	Little	2.5	
	High	36.3	
	Very high	28.7	
Natural calamity	No	81.3	.000*
	Little	5.0	
	High	7.5	
	Very high	6.3	
Early marriage	No	95.0	.000*
	Little	5.0	
	High	0.00	
	Very high	0.00	
Others	No	88.8	.000*
	Little	10.0	
	High	1.3	
	Very high	0.00	

*Statistically significant at level of *P<0.01

Table 2.2 ICI and Friedman Test Rank order of 13 selected causes faced by the child laborers

Item	ICI Score	ICI Rank	Friedman Test (Mean rank)
Poverty	267.50	1	10.84
Unemployment condition of family members	192.60	5	8.11
Low aspirations of parents	153.9	8	7.11
Uneducated family members	223.9	4	9.23
Trouble at home	132.6	9	6.28
Parents under heavy debt	107.7	10	5.78
High cost of education	250.0	2	10.24
Poor schooling opportunity	232.6	3	9.53

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Huge demand of unskilled and cheap labor	178.4	6	7.66
Urban migration	161.2	7	7.38
Natural calamity	38.9	11	3.50
Early marriage	5.00	13	2.58
Others	12.6	12	2.77

$\chi 2$ (12) = 537.69, p<0.001 (Friedman Test)

2.3 Nature of employment and working environment

Table 3 demonstrates the contemporary characteristics of employment and the working environment which would increase the vulnerability condition of child labourers through impairing their physical, psycho-social, and cognitive development. This cross-sectional study explored certain core complications; children usually experience at their workplaces. The findings revealed that among the participants, 73.75% of the child labourers were in paid employment, while 3.75% were unpaid workers (p<0.05). A total of 72.5% were working more than 8 hours a day, which violates the labour laws, while 5% work only spend 7 hours at work and 15% of children worked less than 7 hours a day (p<0.05). A total of 46.25% of child labourers were required to walk to reach at their workplaces, while only 13.75% had the opportunity to use buses (p<0.05). Approximately, 88.7% revealed that they were not paid for additional duties, except 11.25% of child labourers (p<0.05).

The majority (58.75%) of the child labourers were paid a daily wage, followed by 3.75% and 37.5% who were paid on weekly and monthly basis respectively (p<0.05). The chi-square value represents there are no significant differences among the leisure hours, child workers spend at workplaces (P>0.05). In addition, study shows that a total of 38.75% of the children had no leave provisions in the work arrangements, while 61.25% were facilitated (p<0.05). About 90% of the child labourers had no training facilities at their workplaces, although around 67.50% reported that they were supported by their colleagues at the workplace when needed (p<0.05). Notably, the study revealed no differences in the outcomes of receiving hygienic sanitation facilities at workplaces. The majority (35%) of the child labourers had experienced physical pain due to their workload, 23.75% complained of digestive disorders, and 18.75% had dermatological infections (p<0.05). Despite these health adversities, only 25% of the child labourers received medical assistance from their workplaces, whereas 75% were deprived of the facilities (p<0.05). Child labourers were indifferent regarding the possibility of gaining services included in safety or security measure at their current workplaces (P>0.05). The confidence interval was also estimated to give a precise range of values for each characteristic of employment and working environment, within which the true population mean lies (95% chance).

Table 3 Nature of Employment and Working Environment

Items		**n (%)**	**CI (at 95%)**	**P value**
Nature of Employment	Unpaid workers	3 (3.75)	[0.8, 10.6]	.000**
	Paid workers	59 (73.75)	[62.7, 83.0]	

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	Self employed	18 (22.5)	[13.9, 33.2]	
Working Span (Hours/day)	Less than 7 hours	12 (15.00)	[8.0, 24.7]	.000**
	7 hours	4 (5.00)	[1.4, 12.3]	
	8 hours	6 (7.5)	[2.8, 15.6]	
	More than 8 hours	58 (72.5)	[61.4, 81.9]	
Mode of Transportation	Through walking	37 (46.25)	[35.0, 57.8]	.000**
	By bus	11 (13.75)	[7.1, 23.3]	
	Through bicycle	17 (21.25)	[12.9, 31.8]	
	Other means	15 (18.75)	[10.9, 29.0]	
Overtime Working Facility	Yes	6 (7.5)	[2.8, 15.6]	.000**
	No	74 (92.5)	[84.4, 97.2]	
Payment for Additional Duty	Yes	9 (11.25)	[5.3, 20.3]	.000**
	No	71 (88.7)	[79.7, 94.7]	
Method of Payment	Daily	47 (58.75)	[47.2, 69.6]	.000**
	Weekly	3 (3.75)	[0.8, 10.6]	
	Monthly	31 (37.5)	[26.9, 49.0]	
Leisure Hour per Working Day	Up to 15 minutes	14 (17.50)	[9.9, 27.6]	.423
	15 to 30 minutes	24 (30.00)	[20.3, 41.3]	
	30 to 60 minutes	22 (27.50)	[18.1, 38.6]	
	More than 1 hour	20 (25.00)	[16.0, 35.9]	
Proper Leave Facilities	Yes	49 (61.25)	[49.7, 71.9]	.044*
	No	31 (38.75)	[28.1, 50.3]	
Training Facilities by Current Workplace	Yes	8 (10.00)	[3.6, 17.2]	.000**
	No	72 (90.00)	[82.8, 96.4]	
Support from Other Employees During Work	Yes	54 (67.50)	[56.1, 77.6]	.002**
	No	26 (32.50)	[22.4, 43.9]	
Hygienic Sanitation Facilities at Workplace	Yes	41 (51.25)	[39.8, 62.6]	.823
	No	39 (48.75)	[37.4, 60.2]	
Affected by Common Diseases Due to Work	Cough and Cold	13 (16.25)	[8.9, 26.2]	.001**
	Body Pain	28 (35.00)	[24.7, 46.5]	
	Digestive Problems	19 (23.75)	[14.9, 34.6]	
	Dermatological Infections	15 (18.75)	[10.9, 29.0]	
	Headache	5 (6.25)	[2.1, 14.0]	
Medical/Health Support	Yes	20 (25.00)	[23.9, 26.1]	0.01**
	No	60 (75.00)	[58.9, 61.1]	
Safety Measure at Workplace	Yes	33 (41.25)	[30.4, 52.8]	.118
	No	47 (58.75)	[47.2, 69.6]	

*Statistically significant at level of *P<0.05, **P<0.01

3. Discussion

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This paper contributes to the existing research through evaluating the possible determinants of child labour and the patterns of the working environment from a sample of eighty child labourers in Bangladesh.

Data revealed that most of the children are between 12 to 14 years old. A significant proportion have not attended the school. Most child labourers are employed as rickshaw pullers, salespersons, or farmers, which confirms a study conducted by Rahman et al. (1999). A significant proportion of parents had no formal education and were unemployed. Of those parents employed, occupations included agriculture, small-scale business and miscellaneous day labour activities. A plethora of research findings also indicated that substandard socio-demographic status often leads children to the workforce, which is consistent with the findings of this study (Barman 2011; Togunde & Carter 2006). This study found that almost all the child labourers had positive relationships with their parents.

The present study undertook an assessment of the factors responsible for child labour. Notably, the theoretical or empirical research on this topic has received much attention in recent years (Fors 2012). The existing research evidence suggest that poverty, illiteracy (Bourdillon & Carothers 2019), household size, cultural values (Adonteng-Kissi 2018), adult unemployment, higher schooling cost (Barman, 2011) credit market constraint (Adonteng-Kissi, 2018) are the core causes of child labour. Based on this growing body of evidence and systematic survey, the present study identifies a list of possible determinants of child labour applying a rank-order technique. The Influencing Causes Index (ICI) identified poverty as the top ranked factor, and the most powerful force driving children into the labour. A major perplexing outcome of this evaluation is that participants nominated 'the high cost of education' as the second-ranked factor of being in child labour, despite the fact that primary education is free for all children through the Compulsory Primary Education Act 1993 in Bangladesh (Rabbi 2018). The study identifies that parental illiteracy or low levels of education of family members also has a substantial adverse impact on the child labour. Children are less likely to work and more likely to attend school, where the family head has received some education (Ali & Arabsheiban 2017). Parental education level is a factor in a child engaging in the workplace. The fourth-ranked factor identified was 'poor schooling opportunity'. These three factors identify education as a key to deprivation. Education as an important factor in eliminating child labour. Additionally, this new-flagged distinctive ranking technique demonstrated other underlying persuasive indicators such as unemployment condition of family members, demand for unskilled and cheap labour, and urban migration.

The complex nature of employment and the unsafe working environment adversely affects children. The present study explored core domains of these trends. Though the ILO Global statistics reported that most child labourers are engaged in unpaid household services (ILO 2018), the findings here revealed that the majority of the child labourers who work in urban areas are paid. In addition, the study shows that the majority (72.5%) of child labourers work over eight hours in a day, which breaches the international labour laws (ILO 2005). Child labourers are not paid for overtime despite working for low wages. The most damming issue is that only a quarter of the children get more than a one-hour break from work.

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The Child Labour Act in Bangladesh provides for a safe and healthy work environment for children (Dey 2008), but it would appear that the regulations are not being enforced. In addition, a high proportion of the child labourers had inadequate leave opportunities, poor training, little access to healthy sanitation facilities, or medical or health support. This study uncovered that the majority of participants did not have these at their workplaces. It is obvious that the incidence of health risk was exasperated by the lack of mandatory safety measures including workplace safety training, providing personal protective equipment or workplace protect equipment such as, labelling hazardous zones or fire emergency services. A study conducted by Ibrahim et al. (2019) revealed the leading negative effects on the health of child labourers were musculoskeletal injuries, HIV infections, and other infectious diseases. It is worth noting that a high prevalence of physical illness including pain (35%), stomach disorders (23.75%) and dermatological infections (18.75%) were observed in this study among the participants, although the availability of medical evidence was not available. It is obvious that the rates of injury and ill-health are impacted by working conditions, along with the developmental and physical impacts on young children toiling for long hours. However, the incidence of health risk could be reduced by implementing mandatory safety measures including the wearing of protective equipment, mechanical aids where possible, labelling hazardous zones, first aid services, and flood or fire emergency services (Cooper & Rothstein 1995; Bourdillon & Carothers 2019) .

The policy implication of this study covers several areas. Public policies need to encourage disadvantageous children to enrol in primary and secondary education in metropolitan areas. An effective instrument to generate income support measures for poor households should be developed to curb the prevalence of child labour, especially where access to industry or capital markets is limited. Another approach would be to devise new or revised policy interventions focusing the adult education should be established.

4. Materials and Methods

4.1 Study Area

A cross-sectional study was conducted in Sylhet Sadar Upazila (Pathantula, Amberkhana, Shahi Eidgah, Shibgang and Bondor) of Bangladesh. This city receives the country's largest annual remittance portion for the total population 485,138 (BBC News 22 December 2011). The emerging different types of small-scale businesses and industry in this city often use child hands as cheap labours. The employed population between 10 to 19 years is 31,260 in this city (Bangladesh Bureau of Statistics 2015) and demonstrates the increased prevalence of child workers in this city.

4.2 Sample Design and Data Collection

A total of eighty child labourers (between 5-17 years) were recruited through two to three-weeks repeated visits. As there are no specific data regarding the child labour census (aged 5-17 years) of

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Sylhet city available on national data portals, so researcher had to employ a non-probability sampling technique known as snowball sampling. Notably, snowball technique is useful for identifying hard to reach populations (Faugier & Sargeant 1997). A set of piloted unstructured questionnaires were used in data collection phase. Given that participants (child labourers) would not be able to understand and fill-in the survey themselves, a personal interview technique was employed with the identified participants. Each respondent was approached and interviewed separately and assured that all information would remain anonymous and confidential. The data collection proceeded following the approval of ethics application by the University's Committee for the Human and Ethics Review Board. After obtaining informed consent, data were collected between June 2018 and August 2018.

4.3 Data Analysis

The collected data were analysed, tabulated, and summarized in accordance with the objectives of the study. Of note, the current study administered diverse data analytical devises. The socio-demographic characteristics of participants were studied using simple descriptive statistics. To identify and establish possible determinants of child labour in rank order, this cross-sectional study utilized a newly devised ranking tool, the Influencing Cause's Index (ICI) technique (Ahad et al. 2017). The preliminary ideas were gained from the study conducted by Pandit & Basak (2013) to develop this tool. The pilot tested questionnaire associated with this technique includes four response level categories (such as 'very high', 'high', 'little' and 'not at all' and weighting 3, 2, 1 and 0, respectively) for each identified variable. Identification and ordering of possible determinants, applying this tool, followed two steps processes: i) proportion estimation of response categories (four-point scales) for each variable and ii) applying the following formulae to compute the ICI value for each determinant,

$$ICI = P_n \times 0 + P_l \times 1 + P_h \times 2 + P_{vh} \times 3$$

Where,

P_n= Percentage of child labourers not having this as an influencing cause

P_l= Percentage of child labourers having this as a little influencing cause

P_h= Percentage of child labourers having this as a high influencing cause

P_{vh}= Percentage of child labourers having this as a very high influencing cause

However, to test the reliability of the above estimated ICI ranking orders, the Friedman Test statistics was performed. It would provide different mean rank values, which would underpin the admissibility of ICI measurement.

The chi-square test for independence was employed to assess if there any significant differences between two or more categorical variables within each parameter included in possible determinants and in the nature of employment and working environment. Data were analysed using SPSS 26.

5. Conclusions

Child labour is a major hindrance across the developing world, which violates the child rights. Alongside enforcing laws, government should emphasize the rehabilitation of these child labourers working in hazardous environments and provide welfare provisions for the unemployed to encourage schooling for children over seeking work.

The findings exposed some noteworthy limitations including a narrow conceptual idea, new analytical technique, and heterogenous findings. The present study considered no-probability sampling which would boost sampling biasness. In addition, some of the findings were found contradictory or inconsistent with the preceding research results.

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