Prevalence and predictors of child labour among junior public secondary school students in Enugu, Nigeria: a cross-sectional study

Nympha Onyinye Enebe
University of Nigeria Teaching Hospital

Joseph Tochukwu Enebe (drenebe2002@yahoo.co.uk)
Enugu State University of Science and Technology College of Medicine https://orcid.org/0000-0002-3517-1104

Chuka Chike Agunwa
University of Nigeria Teaching Hospital

Edmund Ndudi Ossai
Ebonyi State University Faculty of Biological Sciences

Uchechukwu Enuma Ezeoke
University of Nigeria Teaching Hospital

Arthur Chinedu Idoko
University of Nigeria Teaching Hospital

Chinyere Ojiugo Mbachu
University of Nigeria Teaching Hospital

Research article

Keywords: Child, labour, predictors, prevalence, Enugu, metropolis, Nigeria

Posted Date: November 2nd, 2020

DOI: https://doi.org/10.21203/rs.3.rs-48081/v2

Version of Record: A version of this preprint was published at BMC Public Health on July 7th, 2021. See the published version at https://doi.org/10.1186/s12889-021-11429-w.

Abstract

Background: Millions of children have been identified globally to be involved in child labour with low-income countries being mostly hit. This study was aimed at assessing child labour and its predictors among public secondary school students in Enugu metropolis.

Methods: The study was a descriptive cross-sectional study of 332 junior secondary school students attending public secondary schools in Enugu metropolis, Nigeria. A structured interviewer-administered questionnaire was used for data collection and analyses were done using SPSS version 23 and STATA Software. The level of statistical significance was set at 5% p-value.

Results: The prevalence of overall child labour among the respondents was high (71.7%) likewise its different categories: domestic (52.1%) and economic (34.0%) child labour. About 35.2% of the respondents worked under hazardous conditions while 8% were forced to work. Approximately 65% (236) of the respondents who have heard about child labour perceived it as wrong. They mainly worked to render financial assistance to their parents. Class of study (AOR=2.208 (95% CI: 1.199-4.066) and weekly income earned (AOR=0.316 (95% CI: 0.176-0.567) predicted child labour among the respondents.

Conclusion: The prevalence of child labour among public secondary schools in Enugu was high and the predictors were the class of the respondents and the weekly income they made. This may imply that child labour in Enugu was driven by poverty as respondents who earned higher were more involved in child labour thereby calling for concerted economic and social reforms to reduce this menace.

Background

The United Nations Conventions on the rights of the child (CRC) defines a child as a person below the age of eighteen years unless under the law applicable to the child[1,2], and it stated the need for children to be protected from violence, sexual exploitation, and abuse as well as from work exploitation and hazardous jobs.[1,3] International Labour Organization (ILO) described child labour as the work a child is involved in that can interfere with his education and is psychologically, physically, socially, or even morally dangerous and harmful to him.[3] Such work frequently causes the child to either drop out of school or become a working school child who battles to meet up with school activities. It is an infringement on the right of a child.[4]

It is important to note that not all types of work done by children are regarded as child labour. According to the ILO, for work to be called child labour, it has to deprive the child of his childhood potential and dignity, and be harmful to physical and mental development.[3] Child labour as defined in the Nigerian National Policy on child labour is “the engagement of children below age 18 years in any work that is essentially exploitative and injurious to the physical, social, cognitive and moral development of the child.”[5]

In addition, the international community has set four categories of child labour to be particularly heinous and in its worst forms. They are: slavery, sexual exploitation, illicit activities and hazardous work. These worst forms of child labour are targeted for elimination.[6] Hazardous works are dangerous conditions like construction, mining, quarrying and undersea fishing.[7] Child labour is different from child work. Child work are acceptable works children do which do not affect their health, personal development nor schooling but is necessary for their development, skills, welfare, experience that will help them understand their norms and traditions and become productive adults.[5] Child work and child labour however, are differentiated by age and number of working hours as well as the type of work carried out.[6]

In the year 2008, the International Conference of Labour Statisticians (ICLS) adopted the resolution on child labour concerning the measurement of working time to define child labour and subsequently resolved the target population to be 5 to 17 years; who are engaged in worst forms of child labour, employment below the minimum age-specific threshold or unpaid household services during a specified period.[8] United Nations Children's Fund (UNICEF) and ILO also developed standard indicators for child labour to include children who fall under the following conditions: ages 5-11years - at least one hour of economic work or 28 hours of domestic work per week, ages 12-14years - at least 14 hours of economic work or 28 hours of domestic work per week, ages 15-17years - at least 43 hours of economic or domestic work per week.[9] The Nigerian Multiple Indicator Cluster survey (NMICS) applied this module for the assessment of child labour in 2016/2017.[10]

In Nigeria, ILO, estimated the number of working children under the age of 14 to be 15 million.[11,12] With children under 25 years of age accounting for about 45% of the population of Nigeria, this high prevalence of child labour can be attributed to the rapid growth in Nigeria's population which has a resultant negative effect on the resources of the nation. Also, parents' burden on education, as well as other family up-keeps, has risen as a result of economic hardship in the country, causing parents to rather send their children to work and support the family than to school. This is consequential to the 10.5 million out-of-school children in Nigeria, with northerners being mostly affected.[4]

The levels of practice of child labour in Nigeria has been high and varies across zones. The Northern region is said to be child labour endemic due to "misapplication of the Almajiri system". In the South-eastern and south- south geo-political zones, there is high school drop-out rates as a result of children who work as domestic help. In the western zone, many children are involved in street hawking and trafficked children are engaged as domestic helps. Other labours engaged by children across the country are: mining, quarrying, and breaking of stones as well as agricultural practice where they either work as farm labourers or assist their parents.[5]

Child labour is influenced by the following factors: poverty and loss of employment of parents, rural urban migration, cultural and religious practices, school related factors such as unavailability of school, accessibility, cost and attitude of teachers, large family size due to polygamy, multiple births and none use of family planning.[13] Other contributions to child labour are impacts of HIV/ AIDS which lead to increased number of orphans, impact of conflict/terrorism with consequent displaced children, damage

of schools, fear to attend schools as well as kidnapping of teachers and pupils. Security challenges in Nigeria are promoting factors to child labour. In the north-east Boko haram insurgency has resulted to high number of Almajiris. Other security issues in Nigeria predisposing children to child labour are Fulani herdsmen in the north-central and Southern Nigeria, bandits/cattle rustlers in the north-west and other internal crimes like kidnappings. These have led to great number of internally displaced children and orphans. Such children are traumatized and starved and commonly get involved in child labour menace.[14,15]

It has been found that working children pass through a lot of difficulties. A study carried out in Nnewi, Nigeria in 2010 on sociodemographic characteristics of child street vendors showed that out of the147 children (90 boys and 57 girls) interviewed, only 42.9% had completed primary education, 60.5 had completely dropped out of school, 32.7% had at some time lost their earnings to robbers while 9 girls had been sexually abused.[16]

In addition, child labour is a threat to the achievement of Sustainable Development Goals (SDGs) 1, 3, 4, 5, 8 and 10 which are poverty eradication, good health and well-being for all at all ages, decent quality learning for all children till secondary school level, gender equality and women/girls empowerment, decent work and economic growth and reduction of inequality within and among countries respectively.[17] The affected children lose their freedom, their rights are violated, and they are vulnerable to infections, injuries, sexual abuse, stigma and even death. They in turn lack the human capacity (knowledge, skills and competencies) necessary for great achievements and survival.[18]

Child labour is a threat to both human and economic development of a nation. It interferes with schooling by depriving child labourers of the opportunity to attend school; encouraging them to leave schools prematurely; or by encouraging them to combine school attendance with long and heavy work. In the year 2011, the National prevalence of child labor was 47 percent among children aged 5-14 years. Enugu state with a prevalence of 47.9% was found to be among the 20 states with prevalence greater than the national average.[13] The survey also obtained that the national prevalence of children who were engaged in child labor but were attending schools in Nigeria was 76% while that of Enugu state was 86% which was still above the national level.[13]

While child labour is related to out of school children, majority of child labourers are in-school with the resultant effect of poor school attendance and performance.[19] Also, ILO[20] noticed that much studies have evaluated the impact of child labour and school enrollment. This gives confidence that students school environment can be used to study the different forms of child labour and their prevalence in our environment hence this study is rather school-based.

This study will therefore provide a baseline information on child labour among in-school children in a rapidly urbanizing community in South-eastern Nigeria. It will also complement the information from national surveys as well as that of other researchers and partners in providing data on child labour and its predictors. It will inform policy makers, the general public as well as implementing partners both nationally and internationally on the extent, factors and consequences of child labour in Enugu, Nigeria.

Methods

Description of Study Area: This study was conducted in Enugu metropolis in Enugu state. Enugu State is one of the five south-eastern states in Nigeria. There are 17 Local Government Areas (LGAs) in the state and three of them make up Enugu metropolis. There are 314 public secondary schools and 1,382 private secondary schools in Enugu State with student-qualified teacher ratio and student-class room ratio of 16:1 and 232:1 respectively for public secondary schools. Enugu metropolis habours the majority of the economic activities in the state. The metropolis also has most primary, secondary and tertiary institutions in the state.

Study design: This study was a descriptive cross-sectional study of 332 junior secondary school students in public secondary schools in Enugu metropolis that used quantitative method of data collection to obtain information from the study participants.

Study population: The study population was students in public secondary schools in Enugu metropolis. Students of JSS 2 and 3 were covered by the Universal Basic Education (UBE) program and this programme minimized or even eliminated the effect of non-payment of school fees as a cause of poor school attendance and engagement in child labouring, this informed the choice of this study population for this study. Furthermore, these classes were chosen because they were considered old enough to partake in some meaningful interaction with and answering of questions when compared with those in JSS1 or in primary schools. Senior secondary students could not be considered because of their higher age which might make it difficult to assess child labour among them.

Inclusion Criteria: Students in JSS 2 and JSS 3 in the selected schools in Enugu metropolis.

Exclusion criteria: The following groups of students were excluded from participating in the study: students who were too ill to respond to questions (acutely ill); students with known chronic diseases for which they regularly missed school in order to go for medical check-ups; students who were absent from school on the day of the survey; and newly enrolled students who were not in school in the previous term.

Sample size calculation: The minimum sample size for the study was determined using the formula for estimating sample size for descriptive studies N=Z2pq/d2.[21] From a previous study in Ogun state, 68.6% of the school children practiced child labour.[22] A total of 332 junior secondary school students were studied based on a type 1 error (α) of 0.05 in a two-sided test with a power of 0.8.

Sampling technique: This study used a multistage sampling technique. Enugu metropolis is made up of 3 LGAs. A list of all the public secondary schools in each of the three LGAs was obtained and this formed the sampling frame for the study. At the first stage, two public secondary school were randomly selected from each of the three LGAs in Enugu metropolis and this gave a total of 6 schools that were used for the study. The six schools were found to comprise of 2 boys' schools, 2 girls' schools and 2 mixed. At the second stage, equal number of students (62 students per school) were selected from each of the 6 selected schools making a total of 372 students that were eligible and selected for the study. Also, equal

number of students were selected from each of JSS 2 and 3 classes (31 students from each class). Within each class, a list of all eligible students was obtained and systematic sampling technique was employed to select 31 students from each class of JSS 2 and JSS3. Where there were more than one 'stream'(multiple class groups in a class/sub-classes) in a class making it difficult to obtain the list of all students in that class, simple random sampling was done to obtain one 'stream'/sub-class from that class. Where there exist less than 31 students who met the criteria in a selected class, proportional allocation was done to selected two sub-classes.

Study instruments: The study tool was a pre-tested, structured, interviewer-administered questionnaire that was used for data collection from the eligible students. Data collection was done from September to October 2018. The questionnaires included some relevant sociodemographic variables as well as questions related to the kind of work carried out by the respondents and the number of working hours spent weekly.

Data collection and measurement of variables

Pre-testing of questionnaire: The structured self-administered questionnaire was pre-tested among 45 pupils (10% of the sample size) from a public secondary school not selected for study in Enugu metropolis. This ensured that the questions were clear and complete, and that the structure of the questionnaire was appropriate. The questionnaire was revised accordingly at the end of the pre-testing.

The prevalence of child labour was obtained by adopting the UNICEF's standard indicator for child labour[10] which uses the MICS module on child labour[23] These tools assess child labour as the percentage of children aged 5-17 years with total work hour above the given age-specific threshold in the previous week before the study.

Perception of child labour*:* This was obtained from questions included in the questionnaire. The questions verified if the respondents have heard about child labour in the past and the respondent's view/feelings about whether child labour was right or wrong.

Measurement of variables: The study examined dependent and independent variables. The dependent variables/outcome variables were the presence or absence of child labour. The independent/predictor variables included: socio-economic status of respondents as determined by the "Wealth Index Scale" which asked about ownership of some vital household properties (such as television, refrigerator, car etc.) to reflect the standard of living of the household. For children not living with their parents this was obtained for their caregivers/custodians; Socio-demographic characteristics of students such as age, sex, class, family structure, position of students in the family and total number of house-hold were all analyzed, and the type of work children do, number of working hours, weekly income generated by the respondents from their labour etc

Data analysis:

Data entry and analysis were done using IBM Statistical Package for Social Sciences (SPSS) version 23 and STATA software. The STATA software was used only for the calculation of the wealth index (socioeconomic status) of the participant's families while other remaining analysis were done with SPSS software. Cross tabulation as well as frequency distribution were generated. Test for an association for categorical variables was done using the Chi-square test and multivariate analysis using binary logistic regression was done to determine predictors with the level of statistical significance set by a p-value of less than 0.05.

For the multivariate analysis, variables that had a p-value of 0.05 were entered into the logistic regression model and were used to obtain the predictors of child labour. The logistic regression analysis results were reported using the adjusted odds ratio (AOR), 95% confidential interval, and the level of statistical significance was set at a p-value of <5%. All monetary calculations involving the use of 'The Naira' was done based on a conversion rate of ₦370 equal to one United States Dollar (USD) as obtained at the time of the study.

The STATA statistical software version 12 was used to generate the socio-economic status index using Principal Component Analysis, (PCA). This involved inputting variables related to ownership of ten household items that included radio, television, air conditioner, car, fridge, generator, electric fan, phone, rechargeable light, and electric iron. Quartiles, (Q) was used for calculation of distribution cut off points with each respondent assigned the wealth index score of the household. The quartiles were poorest (Q1), the very poor (Q2), the poor (Q3), and the least poor(Q4). These were further sub-divided into low socioeconomic class (the poorest and very poor) and high socio-economic class (the poor and the least poor) groups.

The primary outcome measure of the study was the prevalence of child labour among the respondents who were attending JSS2 and JSS3 in public secondary schools in Enugu metropolis, Nigeria.

Ethical approval and consent to participate: Ethical approval with ethical clearance certificate number NHREC/05/01/2008B-FWA00002458-IRB00002323 for this study was obtained from the Ethics Review Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla. Approval for the use of the selected schools for the study was also obtained from the Post-Primary School Management Board (PPSMB) of Enugu state. Permission to use a particular school was obtained by the research team from the principals of the selected schools upon our submission of the ethical clearance certificate and approval letter from PPSMB to the principal. Informed consent was sort from the parents/guardians of the selected students through the students who took the informed consent forms to them. Only selected students whose parents signed the consent form were required to sign the assent form.

Some ethical principles observed included: confidentiality, beneficence, and full disclosure of relevant information to participants.

Results

Socio-demographic characteristics of respondents

The total number of 332 students out of 372 students that were eligible and selected for the study participated in the study. This was due to lack of consent and other issues from 40 participants. The mean age of the participants was 14 ±1.2 years with the majority (73.8%) falling within the age range of 12 to 14 years. There were more males than females (53.6% vs 46.4 %). All respondents were Christians and the majority (98%) were from the Igbo ethnic group. The majority (92.5%, 89.2%) were from the monogamous household type and nuclear family structure respectively. A large proportion (78%) lived with at least one parent while 28% lived with either other relatives or unrelated custodians.

Other background characteristics also revealed that the highest level of education of the biological parents was mainly secondary education while it was mostly tertiary education for both male and female custodians of the study respondents. The parents of the respondents were mainly artisans, unemployed and petty traders while the custodians were businessmen, employed in private firms and public servants. The details of the sociodemographic characteristics of the respondents is shown in table 1 and 2.

Prevalence of child labour according to the type of activities done

The prevalence of general child labour among students of public secondary schools in Enugu metropolis, Nigeria was 71.7% while the prevalence of Domestic and Economic child labour was 52.1% and 34.0% respectively. About 35.2% of the respondents worked under hazardous conditions while 8.1% were forced to work. Other details are as shown in table 3.

The pattern of child labour in the previous week before the study

Most of the respondents mainly carried out domestic house works (301, 90.7%) in the previous 1 week before the survey, and close to 20% of them spent greater than 43 hours on domestic work during the same week. The respondents also involved themselves in selling in kiosks (112, 33.2%) and some farm works (65, 19.6%). Figure 1 showed the age distribution of the different categories of child labour. Other details are as shown in figure 2. Table 4 shows the prevalence of child labour according to the different characteristics of the participants. The majority of the child labourers started working between the age of 5-10 years and the mean number of hours the participants worked in the preceding week to the study was 45hours. Other details were shown in table 5. The total number of both economic and domestic work hours in the previous one week was compared in table 5

Perceptions of child labour among respondents

About 29% of the respondents had not heard of child labour before the study and therefore had no view about it. However, out of the 236 respondents that had heard about it, 64.8% (153) of them perceived it as wrong. The details are in figure 3.

Factors associated with child labour (overall)

Class of the child and weekly income generated by the respondents were the predictors of child labour; Lower junior secondary class (JSS2) (AOR=2.180 (95% CI: 1.183-4.016), P = 0.012) and weekly income less than 10,000 naira (USD27) (AOR=0.315 (95% CI: 0.175-0.565), P = <0.001) were the predictors of child labour. Respondents who were in JSS2 were 2.2 times more likely to be involved in child labour than those in JSS3. Also, respondents who earned less than 10, 000 Naira weekly were 3.2 times less likely to be involved in child labour than those who earn more than 10000 naira (USD 27) weekly. The other details were as in table 6

Challenges of child labour of the study participants

The majority (64.2%) of the participants sustained minor injuries during their work, some (28.8%) had minor illnesses like cough, musculoskeletal pains, etc. while Others (16.3%) had physical abuse. Other challenges the participants had while carrying out their work are as shown in figure 4

Discussion

This study showed a high prevalence of child labour among students in public secondary schools in Enugu State, Nigeria (71.7%). This prevalence was higher than the national and Enugu State prevalence (50.8%, 37.8% respectively) of child labour obtained in MICS/NICS survey 2016/2017.[10] It was also higher than the prevalence obtained in the year 2018 by the National Child Labour Survey[10] where about 6 million Nigerian children were involved in child labour and 59.4% of them were in school. However, the prevalence is lower than the UNICEF obtained prevalence of child labour among in-school children in Enugu in 2011 where 86% of the students were found to practice child labour.[13] The variation between the findings of the MICS/NICS survey and mine is expected because MICS/NICS is a household survey where parents rather than the children themselves were interviewed. School-based study gives a wider view since it brings children from different family characteristics and with different work experience together.

This result is comparable with some other school-based studies in Nigeria. It’s similar to the prevalence of child labour in Igbo-Ora, a small town in Oyo State where child labour was assessed among junior secondary school students and obtained to be 72.5%.[24] It is also comparable with 64.5% obtained as the prevalence of child labour by Fetuga et al [22] in Sagamu Local government area (LGA) of Ogun state in 1995 where child labour was assessed among primary and secondary school students aged 5-17 years.

Assessment of the different categories of child labour among the respondents revealed that though 90.7% of the respondents carried out domestic works only 52.1% of them carried it out above the given age-specific threshold while 34.0% of the respondents carried out economic work above the age-specific threshold. Also, 35.2% of respondents worked under hazardous conditions while 8.1% of them were forced to work. The prevalence of economic activities obtained here is far lower than 82.8% obtained by

Fetugan et al [22] in Sagamu, Ogun state Nigeria and also lower than the finding by Adegbenro [25] in Ile Ife, where 85% of the school children traded at a shop and 76.3% carried out street hawking of goods.

On the other hand, the prevalence of domestic work (52.1%) is slightly lower than 65.7% obtained by Owoaje[24] in 2011. The higher prevalence of domestic works compared to economic work could be related to the fact that Enugu is a state with a high number of civil servants who would engage the services of domestic workers commonly called “house helps”. These children are mainly brought from the rural, hinterlands as well as neighbouring states and in most cases, are under age for the size and type of work they are required to do. Differences in economic activities between states could explain the differences in economic work prevalence obtained by the different studies. Thus, studies done in Ile Ife and Sagamu with greater economic activities yielded a higher prevalence of economic work when compared with that obtained in this study.

With the recent improvement in education intervention such as free education for children up to Junior Secondary school, school-aged- children tend to attend schools which saves money for the parents, the rate of involvement in economic activities, therefore, is expected to drop. Majority of the working children in Igbo-Ora [24] worked in their parents’ shop while the majority of the working children in this study carried out unpaid domestic work but among those who carried out economic work, a majority also sold in their parents’ shop while many others involved in different economic activities to either support their parents or themselves financially.

About 78% (188) of overall child labourers fell within the age range of 12-14 years. This can explain the predominance of domestic child labourers. This compares with the finding in Yenagoa by Ekpenyong et al [26] where younger children were more involved in street selling (9-11 years and 12-14 years). Also worthy of note is the fact that this study revealed that the majority of child labourers lived with both parents (61.3%) and more of those living with parent(s) practiced more of economic child labour while more of those living with related or unrelated guardian practiced domestic child labour.

Awareness of child labour among the respondents was not too good with up to 29% of the children not being aware of it. Among those who had heard about it, only 64.8% perceived it as wrong. This means that more than 35% of the respondents perceived it as right and this can explain the fact that 79.5 % of the students were satisfied with the work they did and that more than 32% of them thought that child labour should be encouraged. This is in keeping with the finding by Omokhodion et al [27] in 2005 where 54% of working children in Ibadan market think children should work and the finding in Yenagoa, Bayelsa State [26] where 86% of children and parents on the market area agreed that street trading had no negative impact. This finding shows the difference between perception among parents and the child labourers themselves as 66.19% of parents interviewed in Nnewi, Anambra State perceived child labour as hazardous while the rest thought it was beneficial to the family.[28]

The study revealed association between child labour and age, tribe, gender, socio-economic status, custodians, family size, number of working children, weekly income of students, as well as family structure, however, only age of the students ($p<0.001$), class ($p=0.003$), and weekly income made by the

respondents ($p<0.001$) were found to be significantly associated with overall child labour. Class: AOR=2.180 (95% CI:1.183-4.016) and weekly income: AOR = 0.315 (95% CI: 0.175-0.565) were the predictors of general child labour. Children in JSS 2 were twice more likely to practice child labour than those in JSS3. This could be explained by the fact that JSS3 is an exam class where secondary school students write their first or lower external exams (junior Secondary School Certificate Exam). With the high literacy level of the state, caregivers would prefer to engage children when they are not in exam classes than when they are preparing for an external exam. Similarly, schools engage students in exam classes in such a way that they go home very late when they can no more carry out much work and, on many occasions, they can only work by weekends and on free-days. The above pattern of behaviour of parents and schools is also in keeping with the findings of Okpechi et al[29] in Cross-River South Senatorial district. They noted that child labour negatively influenced the academic performance of students in that region of the state. Likewise, Owoaje et al[24] in Ibadan, Oyo State in the cross-sectional study also found among other findings that junior secondary students that engaged in child labour were more likely to fail their exams and repeat their classes compared to those who did not engage in child labour

Weekly income made by the respondents predicted child labour and children who earned over 1000 naira a day were about 3 times more likely to carry out child labour than those who earned less than 1000 naira. This shows that the money made in the business was a great attraction to the work. This can be explained by the finding that the majority of the economic workers worked either to support themselves or their parents financially. This is supported by the findings that about 90% of the respondents have a large family size (greater than 5) with close to 70% of them having to train more than 5 children. In addition, more than 50% of their households fell within the poorest and very poor category of the Wealth Index quartiles. These findings are in line with the findings by Fetugan [22], Ugochukwu et al [16], and Obioha [30] that low socioeconomic status, poor family background as well as large family size were associated with child labour.

Conclusion

This study showed a high prevalence of child labour with domestic activities being the highest category among the respondents. Though these respondents attend secondary school, a significant number of them regrettably spent over 43 hours in a week working at home; They carried out different forms of labour, some of which were hazardous. The predictors were the class and the weekly income made by the respondents.

This study should be replicated in rural areas and other states in Nigeria to help compare the findings. It is also recommended for further study on the relationship between child labour with the academic performance of students. Policy draft, review, and implementation of the existing ones should be made to help address some of these issues noted in this study. Awareness creation on the consequences of child labour is urgently needed.

Establishment and sustainability of education programs such as the UBE scheme will reduce the cost of education for the parents and guardians thereby improving school attendance and reducing child labour. Government, non-governmental agencies, and interested policy actors should double their efforts and increase their focus and campaign against child labour to speed the process of implementation of laws already existing against child labour in the country.

Limitations of the study: The psychological state of the children which was not determined in the study may have affected the findings of this research. The study was also limited financially as the authors funded the research.

Areas for further research: This study has given an overview of the pattern of child labour in Enugu metropolis. A larger study that can compare urban and rural areas of the state may give a clearer picture. Also, a qualitative study will help get a detailed understanding of the experiences of these child labourers both in their workplaces and in the hands of their caregivers.

Abbreviations

AOR – Adjusted odds ratio

CRC - Conventions on the rights of the child

ILO - International Labour Organization

ICLS - International Conference of Labour Statisticians

JSS – Junior secondary school

LGA - Local government area

MICS - Multiple Indicator Cluster Survey

MSK – Musculo-skeletal system

PCA - Principal Component Analysis

Q - Quartiles

SPSS - Statistical Package for Social Sciences

UNICEF - United Nations Children’s Fund

UNTH - University of Nigeria Teaching Hospital

Declarations

Ethical approval and consent to participate: Ethical approval for the study was obtained from the Ethics Review Committee of the University of Nigeria Teaching Hospital, Ituku Ozalla. The approval also was obtained from the Post-Primary School Management Board and this was taken to the principals of the selected schools for the principals to give permission. Informed consent was sort from the parents/guardians of the selected students through the students who took the informed consent forms to their parents/guardians. Only selected students whose parents sign the consent form were required to sign the assent form. Consent and assent were documented in writing using simple English language. Ethical principles such as voluntariness, confidentiality, beneficence, and full disclosure of relevant information were given to participants.

Consent for publication: Not applicable

Availability of data and materials: The data sets used and/or analysed during the current study are available from the corresponding author on reasonable request

Competing interests: The authors declare that they have no competing interests

Funding: This research was completely sponsored/funded by the authors. There was no funding from any external source for this research work.

Authors' contributions: NO and JT were involved in the conception, designing, data collection, analysis, and final draft of the manuscript. CC contributed to the conception, designing, data collection, and analysis. EN made major contributions in the conception, designing, data collection, analysis, and writing of the final draft of the manuscript. UE contributed significantly to the conception, design, analysis, and writing of the final draft of the manuscript. CA contributed substantially to the conception, data collection, and writing of the final draft of the manuscript. CO contributed significantly to the designing, data collection, and final draft of the manuscript. All authors read and approved the final manuscript.

Acknowledgments: We appreciate the contributions made to this research by the teachers and principals in all the schools used for this research. They assisted immensely in ensuring smooth data collection and organization of the participants. We also acknowledge Drs. Ifeoma Obionu and Ifeoma Okonkwo for their contributions.

References

1. MacPherson S. The Convention on the Rights of the Child. Soc Policy Adm. 1989;23(1):99–101.
2. UNCRC. Convention on the on the Rights of the Child. Vol. 12. 2009.
3. Hilowitz J, Kooijmans J, Matz P, Dorman P, de Kock M, Alectus M. Child Labour: A textbook for university students. 2004. 16 p.
4. UNICEF Nigeria - The children - Child labour. 2015.
5. Federal ministry of labour and productivity. National policy on child labour. Abuja; 2013.

6. ILO. Eliminating the worst forms of child labour in West Africa : A training guide for trainers and practitioners [Internet]. 2013 [cited 2020 Oct 11]. Available from: http://www.ilo.org/ipec/Informationresources/WCMS_IPEC_PUB_25095/lang--en/index.htm
7. ILO. Children in hazardours work: What we know, what we need to do. International Labour Office, Geneva; 2011.
8. International Labour Organization. Report III: Child labour statistics 18th International Conference of Labour Statisticians Geneva, 24 November– 5 December 2008 ICLS/18/2008/III [Internet]. 2008 [cited 2020 Oct 11]. Available from: http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_106182/lang--en/index.htm
9. ILO. Development of indicators on child labour. Cambridge, MA, U.S.A.; 2000.
10. National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). Multiple Indicator Cluster Survey, 2016-17. Abuja; 2018.
11. International Labour Organisation. World Report on Child labour [Internet]. 2015. Available from: https://ourworldindata.org/child-labor
12. Banerjee SR. Child labour. Vol. 89, Journal of the Indian Medical Association. 1991. p. 281–3.
13. Federal Ministry of Women Affairs Nigeria. State Of Nigerian Children; Children Left Behind in Nigeria [Internet]. Abuja; 2015. Available from: https://nigeria.savethechildren.net/sites/nigeria.savethechildren.net/files/library/State of Nigerian children report.pdf
14. Federal Ministry Of Education. Nigeria Education for All 2015 National Review. 2015.
15. federal ministry of women affairs and social development. Federal Republic of Nigeria. 2014; (October):1–46.
16. Ugochukwu E, Okeke K, Onubogu C, Edokwe E. Socio - demographic characteristics of child street vendors in Nnewi, Nigeria. Niger J Paediatr. 2012;39(4).
17. UNDP. Sustainable DevelopmentGoals. 2017.
18. Quattri M, Watkins K. Child labour and education A survey of slum settlements in Dhaka. 2016; (December):80.
19. Global March Against Child Labour. Policy Paper : Out-of-school Children and Child Labour [Internet]. Haarlem, the Netherlands; 2014. Available from: www.globalmarch.org
20. Orazem, Peter F and Gunnarsson V. Child labour , school attendance and academic performance : A review. ILO. 2003. ILO/IPEC Working Paper.
21. Kirkwood B, Sterne J. Medical statistics. Med Stat. 2003;513.
22. Fetuga BM, Njokama FO, Olowu AO. Prevalence, types and demographic features of child labour among school children in Nigeria. BMC Int Health Hum Rights. 2005;5(April).
23. UNICEF. Multiple indicator cluster surveys (MICS). Series of country surveys. New York: UNICEF. 1995.
24. Owoaje ET, Ige OK, Bamgboye E. Working school children in a Nigerian community: Revisiting the issues [Internet]. Vol. 4, International Journal of Health Research. Poracom Academic Publishers;

2011 [cited 2020 Oct 11]. p. 11–9. Available from: http://www.ijhr.org

25. Adegbenro CA, Opasina OF, Fehintola FO, Olowookere SA. Predictors of Child Labour Among In-School Adolescents in a Rural Local Government Area in Oyo State, Nigeria. Eur Sci Journal, ESJ. 2017;13(23):193.
26. Ekpenyong SN, Sibiri AE, Island W. Street Trading and Child Labour in Yenegoa. Int J Sci Res Educ. 2011;4(March):36–46.
27. Omokhodion FO, Omokhodion SI, Odusote TO. Perceptions of child labour among working children in Ibadan, Nigeria. Child Care Health Dev [Internet]. 2006 May [cited 2020 Oct 11];32(3):281–6. Available from: https://pubmed.ncbi.nlm.nih.gov/16634973/
28. Ubajaka C, Duru C, Nnebue C, Okwaraoha O, Ifeadike G. Afrimedic Journal. Vol. 1, Afrimedic Journal. Nnamdi Azikiwe University Teaching Hospital; 15–19 p.
29. Okpechi PA. The negative effect of child labour on academic performance of secondary school students in central senatorial district of Cross River State-Nigeria. Glob J Educ Res. 2018;13(1):37.
30. Obioha EE. Becoming a Street Child in Poverty Ridden Society: A Descriptive Case of Kaduna Metropolis, Nigeria. J Soc Sci [Internet]. 2009 Apr [cited 2020 Oct 18];19(1):41–9. Available from: https://www.tandfonline.com/doi/abs/10.1080/09718923.2009.11892689

Tables

Table 1 showing the socio-demographic characteristics of respondents

Variables		Frequency (n=332)	Percent
Gender	Male	178	53.6
	Female	154	46.4
Ethnicity	Igbo	325	97.9
	Minority eg. Ijaw	7	2.1
Age category (years)	9-11	9	2.7
	12-14	245	73.8
	15-17	78	23.5
	Mean age (SD) = 14 (1.2)		
Household size category	1-4	37	11.1
	5-9	264	79.5
	10+	31	9.3
Total number of children category	1-4	101	30.4
	5+	231	69.6
Birth order category	1-4	250	75.3
	5+	82	24.7
Custodian of the respondents	Both parents	210	63.3
	Single mother	30	9.0
	Single father	3	.9
	Other relatives	55	16.6
	Unrelated guardian	34	10.2
Employment status of the father	Petty trading	50	15.1
	Big business	58	17.5
	Public servants	61	18.4
	Employed in a private firm	17	5.1
	Artisan / Self-employed	110	33.1
	Farmer	20	6.0
	Unemployed	16	4.8
Employment status of the mother	Petty trading	101	30.4
	Big business	50	15.1
	Public servants	55	16.6
	Employed in a private firm	2	8.1
	Artisan / Self-employed	59	17.8
	Farmer	25	7.5
	Unemployed	15	4.5
Employment status of the male custodian	Petty trading	25	26.9
	Big business	24	25.8
	Public servants	12	12.9
	Employed in a private firm	28	30.1
	Artisan / Self employed	1	1.1
	Farmer	2	2.2
	Unemployed	1	1.1
Employment status of the female custodian	Petty trading	9	9.7
	Big business	21	22.6
	Public servants	24	25.8
	Employed in a private firm	13	14.0
	Artisan / Self employed	23	24.7
	Farmer	2	2.2
	Unemployed	1	1.1

Table 2 showing educational level s of parents/guardians

Educational levels Father	Frequency (n=332)	Percent
No formal education	6	1.8
Primary	59	17.8
Secondary	173	52.1
Tertiary	94	28.3
Mother		
No formal education	8	2.4
Primary	46	13.9
Secondary	178	53.6
Tertiary	100	30.1
Male custodian		
No formal education	0	0
Primary	9	9.7
Secondary	31	33.3
Tertiary	53	57.0
Female custodian		
No formal education	0	0
Primary	10	10.8
Secondary	33	35.5
Tertiary	50	53.8

Table 3 showing the prevalence of child labour according to the type of activities done

Variables	Frequency (n=332)	Prevalence (%)
Child labour (overall)	238	71.7
Domestic work	173	52.1
Economic work	113	34.0
Hazardous work	117	35.2
Forced to work	27	8.0

Table 4 showing the prevalence of child labour by different categories

		Child labour		
Age category (years)	**Variables**	**Yes (332)**	**No (N=332)**	**Total**
	5-11	10(3.0)	0(0)	10(3.0)
	12-14	187(56.7)	57(17.2)	244(73.5)
	15-17	41(12.3)	37(11.1)	78(23.5)
Class	JSS2	92(27.7)	20(6.0)	112(33.7)
	JSS3	146(44.0)	74(22.3)	220(66.3)
	Poorest	61(18.4)	22(6.6)	83(25.0)
Wealth Index quart	Very poor	60(18.1)	29(8.7)	89(26.8)
	The poor	58(17.5)	22(6.6)	80(24.1)
	Least poor	59(17.8)	21(6.3)	80(24.1)
Age when started work (years)	<5	23(6.9)	8(2.4)	31(9.3)
	5-10	120(36.1)	39(11.7)	159(47.9)
	>11	95(28.6)	47(14.2)	142(42.8)
	1-4	72(21.7)	29(8.7)	101(30.4)
Total number of children	>5	166(50.0)	65(19.6)	231(69.6)
	Total	238(71.7)	28.3(94)	
Birth order	1-4	184(55.4)	66(19.9)	250(75.3)
	>5	54(16.3)	28(8.4)	82(24.7)
Total no of working children	1-4	170(51.2)	75(22.6)	245(73.8)
	>5	68(20.5)	19(5.7)	87(26.2)
	1-4	26(7.8)	11(3.3)	37(11.1)
Household family size	5-9	186(56.0)	78(23.5)	264(79.5)
	>9	26(7.8)	5(1.5)	31(9.3)
Satisfied with work	Yes	188(56.6)	76(22.9)	264(79.5)
	No	50(15.1)	18(5.4)	68(20.5)
Self-ownership of business	Yes	21(6.3)	5(1.5)	26(7.8)
	No	217(65.4)	89(26.8)	306(92.2)
	Parents	146(44)	59(17.8)	205(61.7)
Custodian	Single mother	24(7.2)	7(2.1)	31(9.3)
	Single father	2(0.6)	1(0.317)	3(0.9)
	Other relations	41(12.3)	17(5.1)	58(17.5)
	Unrelated guardian	25(7.5)	10(3.0)	35(10.5)

Table 5 showing some of the working characteristics of the respondents

Variables		Frequency		Percentage	
Age when started work category (years)	<5	31		9.3	
	5-10	159		47.9	
	11+	142		42.8	
	Mean (SD) = 9.73(2.8)				
Total work hours in the previous 1wk (hours)	<14	24		7.2	
	15-28	62		18.7	
	29-43	77		23.2	
	>43	169		50.9	
	Median (Range) = 45 (4-145)				
Variable		**Economic activities**		**Domestic activities**	
		Frequency	**Percentage**	**Frequency**	**Percentage**
work hours in the previous 1wk (hours)	<1	62	18.7	0	0
	01--14	128	38.6	60	18.1
	15-28	82	24.7	109	32.8
	29-43	41	12.3	95	28.6
	>43	19	5.7	68	20.5
	Median (Range)	28 (2-127)		12 (0-84)	

Table 6 showing factors associated with child labour (overall)

Variables		Overall child labour (n= 332)		P-value	AOR (CI)
		Yes N (%)	No N (%)		
Age category	5-11	9(100)	0(0)		
	12-14	188(76.7)	57(23.3)	**<0.001**	1.20(0.7-2.0)
	15-17	41(52.6)	37(47.4)		
Gender	Male	134 (75.3)	44 (24.7)	0.143	1.23(0.7-2.0)
	Female	104 (67.5)	50 (32.5)		
Class	JSS 2	92(82.1)	20(17.9)	**0.003**	**2.18(1.2-4.0)**
	JSS3	146(66.4)	74 (33.6)		
Socio-Economic Class (SEC)	Low SEC	117 (73.1)	43 (26.9)	0.626	N/A
	High SEC	121 (70.3)	51 (29.7)		
Custodians	Both parents	146(71.2)	59(28.8)	0.807	N/A
	Single parents	26(76.5)	8(23.5)		
	Others	66(71.0)	87(89.0)		
Birth order	1-4	184(73.6)	66(26.4)	0.204	N/A
	5+	54(65.9)	28(34.1)		
Family size	<5	47(70.1)	20(29.9)	0.763	N/A
	5 and above	191(72.1)	74(27.9)		
Number of working children	1-4	170(69.4)	75(30.6)	0.204	N/A
	5+	68(78.2)	19(21.8)		
Age when started work	<5	23(74.2)	8(25.8)		
	5-10	120(75.5)	39(24.5)	0.224	N/A
	>10	95(66.9)	47(33.1)		
Weekly Income of student	<1000	139(64.7)	76(35.3)	**<0.001**	**0.32(0.2-0.6**)
	1000 and above	99(84.6)	18(15.4)		
Household type	**Monogamous**	222(72.3)	85(27.7)	0.365	N/A
	Polygamous	16(64.0)	9(36.0)		
Family structure	**Nuclear**	209(70.6)	87(29.4)	0.211	N/A
	Extended	29(80.6)	7(19.4)		

Figures

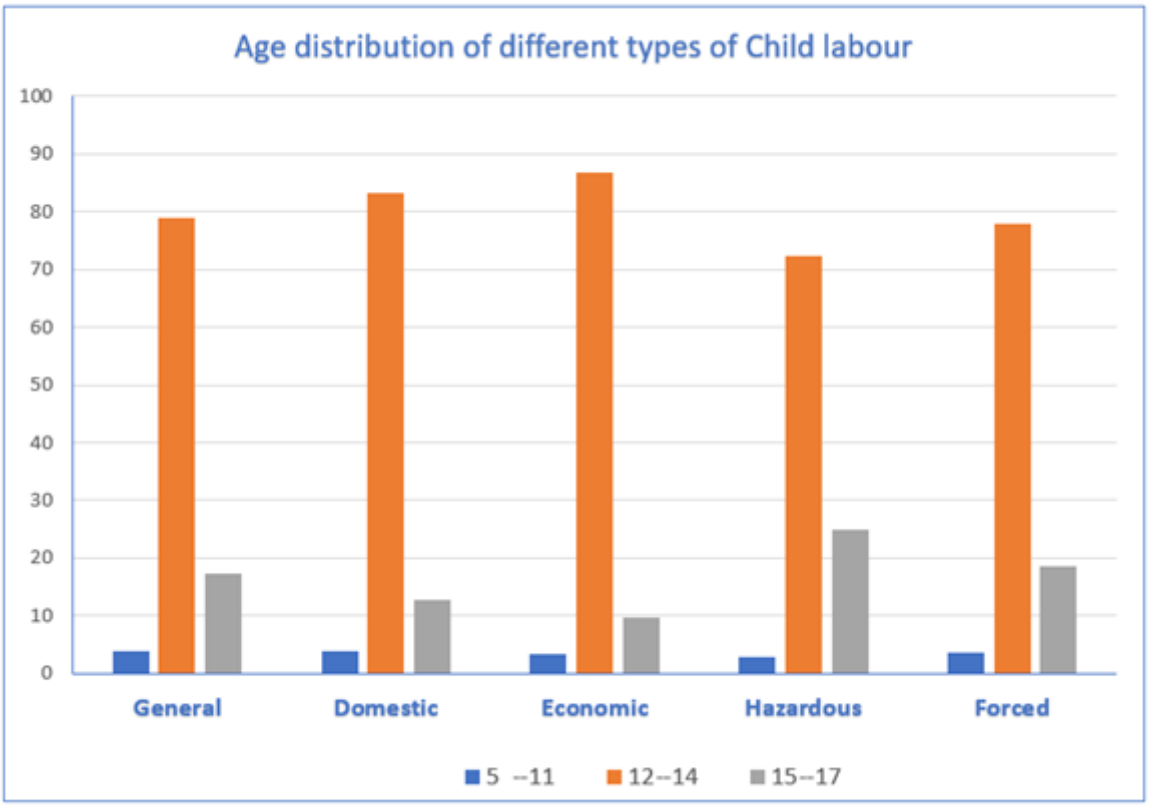

Figure 1

Showing the age distribution of different categories of child labour

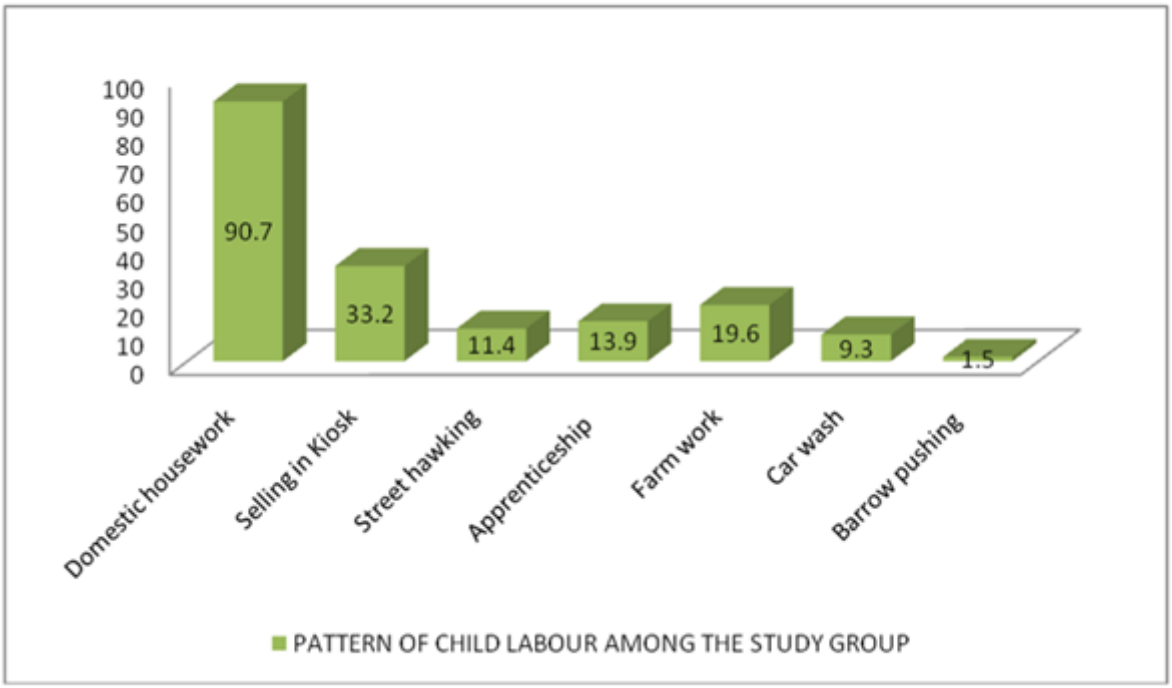

Figure 2

Showing the pattern of child labour in the previous week before the study

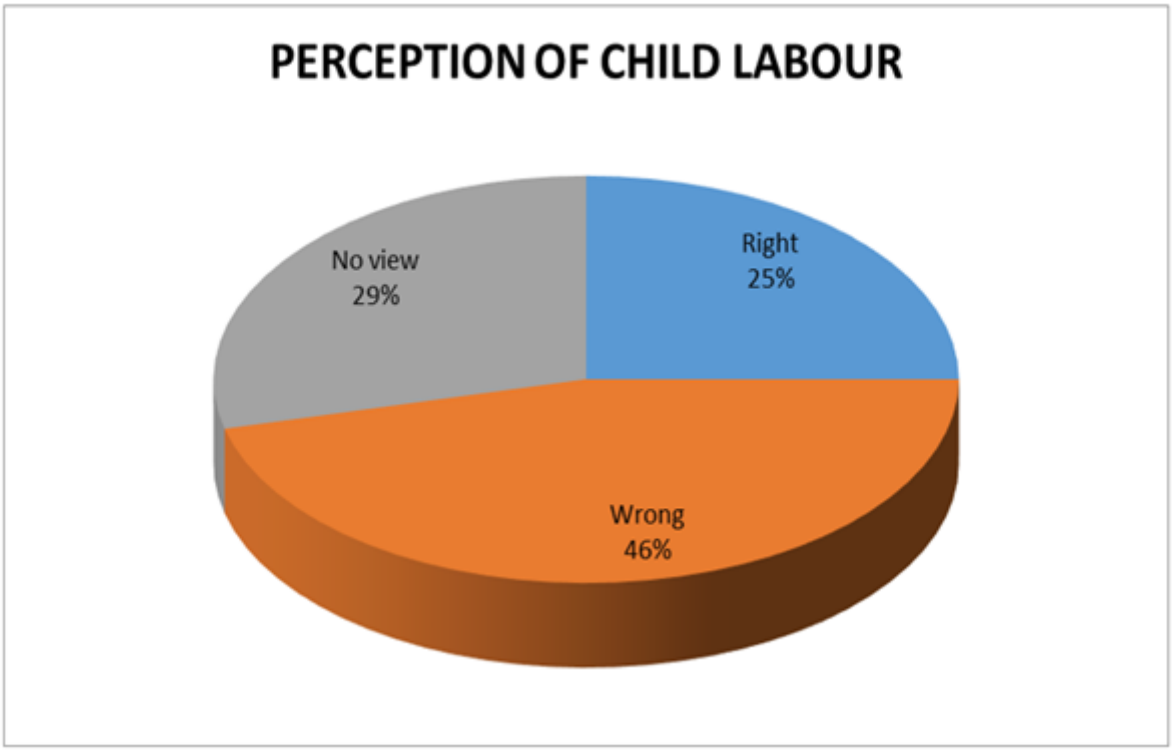

Figure 3

Showing the perceptions of child labour among respondents

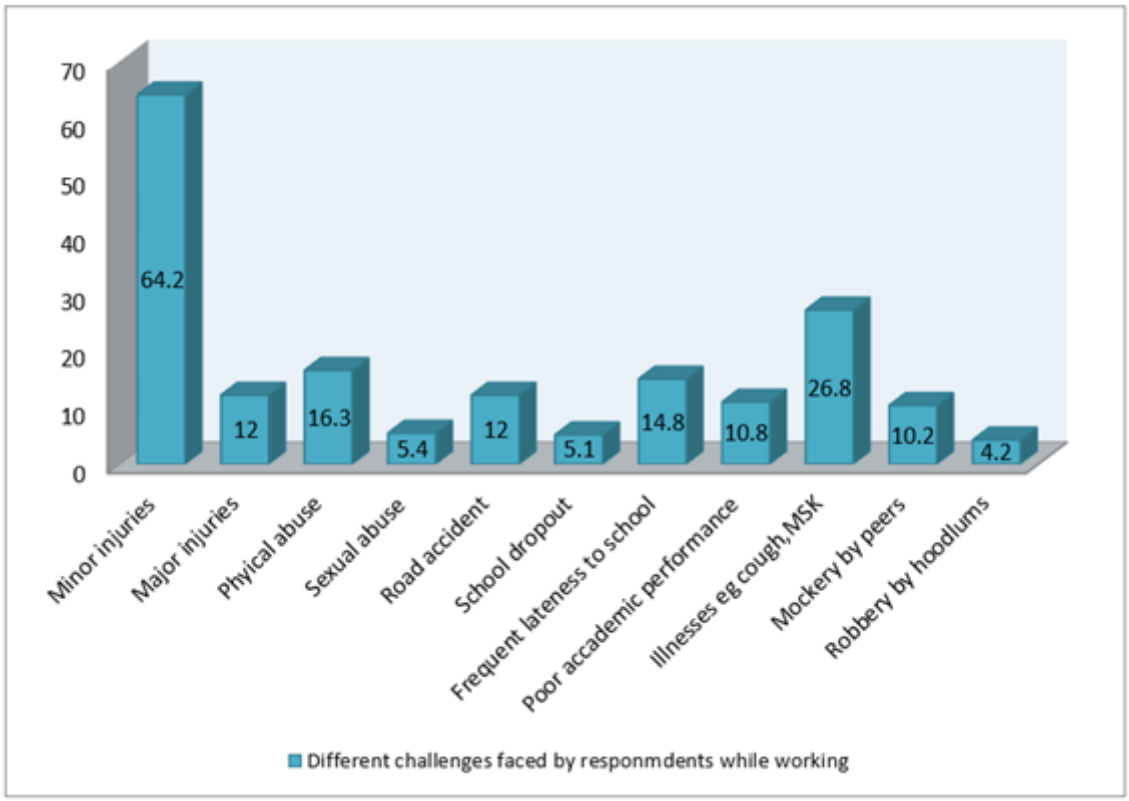

Figure 4

Showing the challenges of child labour of the study participants. MSK – Musculo-skeletal system

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- CHILDLABOURMPHQUESTIONNAIRE.doc