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Factor Analysis Technique on the Causes, Occupations and Effects of Child Labour on Primary Education in Matungulu Sub-County, Machakos County, Kenya

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Abstract:

The International Labour Organization reports that approximates, globally 215 million children are involved in child labour. These children work under harmful conditions and circumstances that are detrimental to their physical, moral and intellectual development. In Kenya, it is estimated that the number of the working children is 3.5 million. The child labourers work in hazardous and exploitative conditions where they have no access to basic education. This study sought to identify the causes of child labour in Matungulu subcounty; establish the occupations child labourers undertake; and determine the effects of child labour in primary school education. Basic Needs Theory (Abraham Maslow) was used as the theoretical basis to explain the identified issues of child labour in relation to primary school education. The study used pair wise correlations and factor analysis techniques. The study established that child labour is positively and significantly related to peer influence and pregnancy. Child labour is predominant in activities of farm workers and fetching water. The effects of child labour were manifested before entry to school (low enrolment), during school (lack of concentration or participation in class) and at the exit of school (decline in completion). Hence, the complete cycle of education process was affected by child labour. On the causes of child labour five factors conveyed 35.1% of the total variation of the set of 18 original variables; for the child labour activities, the five factors conveyed 42.9% of the total variation of the set of 11 original variables; while for the different effects of child labour, the 10 factors conveyed 41.0% of the total variation of the set of 19 original variables. Based on the findings of the study, the following recommendations were made; first parents should be more concerned and involved in their children's education, not only by playing their role in paying school dues but also through regular visits to the schools to liaise with the teachers about the students' behaviour and performance; and second future studies in factor analysis should employ a structural equation model and path analysis diagrammatically drawn to establish the sequencing of the causes, activities and effects of child labour. This would identify the direct and indirect channels /ways.

Keywords: Factor analysis, pair-wise correlations, child labour

1. Background

Childlabour is a global problem (Githitho-Muriithi, 2010; Srivastava, 2011) which has existed over the centuries not only in the impoverished areas of developing countries but also in developed countries until the beginning of the 20th century. Asia, Africa and Latin America have large number of children whose wellbeing is jeopardized due to hazardous working conditions (Dachi & Garrett, 2003).At the world Education Forum in Dakar in April 2000, 185 governments committed themselves to obtaining Education for All (EFA) by 2015. Despite efforts made, childlabour poses a major challenge to this goal. The high incidence of children involved in childlabour continues. Childlabour is still common in various parts of the world especially in African countries where childlabourers work in; factory work, commercial sex and agriculture to name but a few. In Africa, it is estimated that, 37% of children 5 to 14 years are actively involved in exploitative and hazardous forms of work. These conditions not only endanger the health of the child, safety, dignity and morals but also deny them the right to grow, develop, enjoy their childhood and access basic education which is their right. Childlabour participation rates are highest in East Africa followed by Central Africa and West Africa. Childlabour is contentious in Kenya because it is a human rights issue afflicting over 1.9 million children of school going age. These children are supposed to be attending primary school education as opposed to being subjected to exploitation and hazardous work. Childlabour is rampant in communities in ASALs like Matungulu sub-county. In Ukambani, famine and hunger have been a major drawback causing children from the ASALs perform dismally in school and others engage in childlabour for survival. Childlabour is an obstacle to the effective implementation of Free Primary Education (FPE) which was introduced in 2003 to ensure that all school going age children attain education without any form of discrimination. Thus, there is need to stem out childlabour to enhance attainment of primary education for all children regardless of their socio-economic backgrounds. In Matungulu sub-county as in other parts of the country, children suffer immensely from the challenges of childlabour.

1.1. Problem Statement

The Kenyan government has adopted legislation to prohibit the employment of children in accordance to the Convention on the Rights of the Child and ILO conventions. In Machakos County poverty was as one of the reasons why the youth engage in child labour and also school dropout was linked to child labour(National Council for Population and Development (NCPD), 2017). Despite free primary education in Kenya, large numbers of children remain out of school(Githitho-Muriithi, 2010). In spite of these efforts, childlabour still persists on a large scale. In Arid and Semi-arid areas, Matungulu sub-county inclusive, the level of poverty is at a high rateand majority of children are out of school. These children engage in childlabour activities where they are usually exploited. The interpretation of this scenario is that, the society and government seems not to effectively protect the rights of vulnerable children against exploitation and abuse of any form.

1.2. Study Objectives

The specific objectives of the study are to:

- Identify the causes of childlabour in Matungulu sub-county
- Establish the occupations child labourers undertake
- Determine the effects of childlabour in primary school education

1.3. Theoretical Framework

Maslow (1943) Basic Needs Theory was formed basis for explaining the causes and effects of childlabour on the participation and completion rate of pupils in primary education. In this theory, Maslow points out the basic human needs in a form of hierarchy. They include; physiological needs, safety and security needs, love and belonging needs, esteem needs and then self-actualization. Maslow's theory is relevant in this study since the causes and effects of childlabour can be inferred from it.

The physiological needs are the literal requirements for human survival and the most crucial ones in people's lives which if not met, the human body cannot function appropriately. This level of needs is the most relevant in this study of all the other levels for it strongly gives the reasons that push children out of their families and engage in childlabour. The needs in this level include; food, shelter, clothing and education. It is found that in a family where children's physiological needs are not met for instance due to poverty, such children will seek for employment so as to earn money to enable them meet these needs. As a result, these children lack opportunities to access primary education.

The safety and security needs come the second in the hierarchy of needs. These needs manifest themselves in childlabour when children experience insecurity and lack of safety in the family especially due to violence. The presence of violence in the family creates fear among children and especially where they fall victims of fights from parents. In such situations, children may move out of their families hoping to have a better environment to live in that may offer security, stability and protection. Consequently, these children engage in childlabour activities for survival. They are then tied up and denied any opportunity to access basic education.

The love and belonging needs is the third layer of human needs and involve emotionally based relationship. Children, like any human being need to have a sense of belonging and acceptance. They need to be loved, accepted and supported by their parents as well as friends. When these needs are not met in the families, children experience loneliness and have social anxieties. As a result they may wish to leave their families and search for friends in order to have affectionate relationship and a sense of belonging. While doing this they possibly land in bad companies which influence them to indulge in childlabour activities for survival. They usually take risk in doing hazardous jobs like prostitution and hawking in streets. Such children do not participate in any learning activities and thus lack skills provided in education. The esteem needs come the forth in the hierarchy of needs. Maslow noted two versions of esteem needs which are; a lower and a higher and. The layer are in the need for the respect of others, the need for attack provided in extention.

The esteem needs come the forth in the hierarchy of needs. Maslow noted two versions of esteem needs which are; a lower one and a higher one. The lower one is the need for the respect of others, the need for status, recognition, attention, appreciation and dignity among others. The higher one involves the need for self-respect including such feelings as confidence, competence, achievement and freedom to name but a few. When these needs are not met especially in the family set up, they may make children have low self-esteem and develop inferiority complexes. It is evident that poverty deprives children self-esteem hence leaving them hopeless where they no longer value themselves. Consequently, they leave their families and seek for jobs wherever available regardless of their nature. They do so in hope of reviving their lost self-esteem.

Self-actualization is the highest level in the hierarchy of needs that involves the continuous desire to fulfill potentials of being that entire one can be. These needs are a matter of becoming the most complete and the fullest and are only fulfilled after the other four types of needs have been met. In relation to childlabour, the desire to realize one's own potential and possibilities lack among childlabourers since they do not succeed in fulfilling all the lower levels in the hierarchy of needs which can only be realized with the elimination of childlabour. Therefore, the theory will be relevant in the assessment of the impact of children's labour activities on schooling-related issues such as school dropout, absenteeism, lateness and academic performance rather than facing on only parental resource on children's education.

2. Literature Review

2.1. Causes of Child Labour

Child labour is characterized by denial of the right of children to education and other opportunities; children's separation from their families; and poor working conditions that include among others long working hours, poor working

environment, heavy work regardless of age and sex(Dachi & Garrett, 2003). Childlabour is a persistent problem found throughout most of the developing countries and to a lesser extent in developed countries(Abiodun & Okoruwa, 2006). There are many places without child labour laws or where they are not enforced. Many children have to go to work, rather than school in order to support their families or themselves. In such cases children take up responsibilities that are not theirs and in the end lose the precious opportunity of schooling.

The reasons for childlabour are manifold and depend on the context. HIV pandemic chronic poverty, or phan hood and ignorance of parents among others are common causes. In sub-Saharan Africa, more than 15% of adults are HIV positive and prevalent rates in some of the southern African countries are as high as 25%. In 2001, 34m children in sub-Saharan Africa were orphans, one-third due to the AIDS epidemic. The impact is most acute for girls and boys already facing hardship and neglect. Orphaned children are typically brought up by grandparents, other relatives or possibly unrelated households in the community. In such cases, most children do not access education which is one of the most important factors in shaping their future. Evidence from the demographic and health surveys for ten countries in sub-Saharan Africa in which households were interviewed between 1992 and 2000 revealed that, orphaned children in Africa live on average in poorer households. They are significantly less likely than other children to be enrolled in school. This shows clearly how orphaned children are disadvantaged in terms of attaining education (Boler & Carroll, 2003). These children normally engage in childlabour for survival and thus, lack basic education. The root cause of child labor is extreme poverty which forces the parents to employ their children for some extra money for daily living (Naeem, Shaukat, & Ahmed, 2011). Where parents are abjectly poor, childlabour becomes one of the feasible means of supplementing family incomes. After becoming a childlabourer it becomes more difficult to join school. This is a clear indication of how childlabour influences pupils' learning. Even where parents can afford tuition fees, marginal costs like school uniform and books may keep a child away from school. Most childlabourers are from poor families or under privileged sections of the society. Although poverty dictates the needs for some children to make an economic contribution to their family, it cannot justify placing the children in hard labour that jeopardizes their lives. Nwokoro (2011) deduced that in Nigeria, child labour is associated with a number of remote and immediate causes by different researchers, popular among which include; poverty, illiteracy, unemployment, culture, large household sizes, broken marriages and early loss of parents, ineffective laws and policies gravitated by lack will to enforce them, corruption and lack of appropriate social safety nets. Ignorance is said to be a contributing factor to childlabour. Many people particularly in the developing world, Kenya inclusive are ignorant of how childlabour manifests itself and the extent to which the practice is harmful and hazardous to children's life and society in general. In relation to ignorance, it is observed that the less educated parents tend to send their children to work and these children grow up to be less educated parents who then send their children to work. Since education is a strong predicator of income, this is a mechanism that generates a poverty trap, a situation in which cause and effect are reinforcing, resulting in persistence of poverty from generation to another. Although this study has shown how poverty affects schooling of pupils it has failed to give solutions to the problem of poverty in relation to childlabour and education.

2.2. Occupations in Childlabour

In India, Srivastava (2011) noted that among the occupations wherein children are engaged in work are construction work, domestic work and small-scale industries. Incidentally, agriculture is not only the oldest but also the most common child occupation worldwide. Some of the industries that depend on child labor are bangle-making, beedimaking, power looms and manufacturing processes. Dachi and Garrett (2003) observes that in Tanzania there are worst forms of child labour such as sexual exploitation, prostitution, bonded labour and slavery. In Kiambu County of Kenya, Githitho-Muriithi (2010) observed that most children are found working on farms, large scale coffee and tea farms where they harvest coffee berries and tea leaves, or on smaller farms where subsistence farming takes place. Girls especially, are often engaged in domestic work, sometimes in their homes or the homes of relatives for no pay, or in the homes of others for very little pay. Lastly, boys in particular work as hawkers, porters, shepherds.

2.3. Effects of Child Labour

Frequently, boys and girls undertake different tasks. As a result, they are exposed to different health and safety hazards. They may also face different impacts on their education depending on the time requirements of the tasks and the time of day theyare undertaken (FAO, 2018). The introduction of FPE in 2003 in Kenya led to a dramatic increase in enrolment rates for both boys and girls. At national level, primary enrolment rose from 5.9 to 7.2 million pupils. Despite this however, more than 1 million children of school going age are still not attending school. These children are said to be victims of childlabour which hinders them from either attending school at all or performing poorly due to inconsistency in attendance. This can be attributed to the fact that there is limited research in Kenya indicating the actual relation between childlabour and schooling. Thus childlabour remains a major hindrance to education for many children.

3. Research Methodology

3.1. Research Design

Quantitative approach was used to generate numerical data in determining the approximate number of childlabourers in schools and the number of school drop outs due to childlabour.

3.2. Location of the Study

The study was carried out in Matungulu sub-county, Machakos County which primarily lies within the ASALS of Kenya. Purposive sampling was used to select Matungulu sub-county. The sub-county was curved from Kangundo district in 2009. Matungulu is a relatively remote rural set up which has very limited and seasonal work opportunities. It is predominantly inhabited by Akamba. A report on livelihood feasibility in the area by Plan International (July, 2011) revealed that there are key challenges experienced in meeting the right to survival, protection and education where the major challenge was high levels of poverty. Moreover, there are many reported cases of childlabour activities which include; sand harvesting, working in stone quarries and being employed as house helps. These cited examples indicate the presence and prevalence of childlabour in the cited sub-county hence, justify the need for this study.

3.3. Sample Size and Sampling Procedures

Simple random sampling was used to select 24 public primary schools out of 80. Then four teachers from each of the sampled schools, were selected using purposive sampling producing as sample size of 96 teachers. These included the head teachers, class teachers of standard 6 and 7 and teachers in the guidance and counseling unit. The reason for this is because these respondents are of valuable sources of information concerning child labour the problem at hand. The researcher used purposive sampling to select pupils in standard 6 and 7, because they can answer more accurately for themselves and their responses are truly representative. The sample also included children who participate in childlabour who were identified with the assistance of the school administration. In each of the selected schools, 10 pupils of equal gender were sampled for the study which translated to a total of 240 in the whole sub-county.

3.4. Data Analysis

Data acquired from questionnaires was analyzed using pair wise correlation and factor analysis. Pair wise correlations were used to establish relation between child labour and primary school education. Factor analysis was used to reduce and group the various causes, occupations and effects of child labour.

4. Data Analysis and Discussions of Results

4.1. Factor Analysis

The concepts underlying the set of indicators available from the data can be obtained by using principal component analysis (PCA)(Jolliffe & Cadima, 2016). Factor analysis (FA) can be seen as an extension to PCA, and one of the most commonly used initial factor extraction methods among social scientists is based on principal components. In the factor model, factors are determined on the basis the common variation among the original variables. The numerical results of FA are dependent on the initial number of factors chosen. Therefore, the number of factors is ideally determined in advance from the theoretical point of view (Watkins, 2018).

In FA the proportion of variance of each variable explained by common factors is desired to be as great as possible, but finding a meaningful interpretation of the factors is also important. Due to the indeterminacy of the estimation there are an infinite number of possible solutions in FA. After the initial extraction, factors can be rotated using various rules in order to find alternative, hopefully improved, interpretations of factors(Osborne, 2015). For instance, Varimax rotation seeks a solution where each factor represents a high proportion of the variation in a small number of observed variables and nearly none of the variation of the others. As Varimax retains the independence of factors (orthogonality), the proportions of each variable's variation explained by common factors (communalities) are unchanged. It is appropriate to try an oblique rotation technique if the latent concepts represented by the factors are not expected to be independent of each other from a theoretical point of view(Osborne & Fitzpatrick, 2012). This may well be the case with education or child labour indicators since different aspects of education and or child labour are likely to be interrelated.

Hence, before conducting factor analysis, the study first checked for the interrelationship between the variables using pairwise correlation tests. The correlations were further subjected to a test of statistical significance using the student (t) test. The statistically significant interrelationships between any two variables was ascertained at the 5percent level of significance which was denoted by * in the respective tables. This was done for the various perceived causes of child labour as reported by the respondents; the activities the children engage in; and the effects of child labour on the life of the pupils.

4.2. Various Causes of Child Labour

4.2.1. Pairwise Correlation between Various Causes of Child Labour

From the correlation table on the causes of child labour; child labour in school was statistically and significantly correlated with a number of causes such as to earn living, to get money, to provide for the family parents irresponsible, to keep them busy, peer influence, ignorance by parents, and pregnancy.

However the interrelationship between the various causes revealed that first to provide for the family is correlated with poverty, peer influence, lack of role models, pregnancy, family problems /violence, to earn living, to pay for school fees, they are orphans, to take care of their siblings; second peer influence is correlated with indiscipline, Ignorance by parents, pregnancy, family problems /violence; third ignorance is correlated with drop out from school, pregnancy, lack of guidance and counseling; fourth family problems /violence is correlated with pregnancy, indiscipline, to purchase illegal

drugs and fifth lack of role models is correlated with leisure activities like videos. Hence, there exists a correlation between at least two causes of child labour and all the included causes could be appropriately grouped into five distinct categories as given above.

4.2.2. Factor Analysis for the Causes of Child Labour

Table 2 shows the results of the factor analysis for the causes of child labour indicators. The initial factor extraction method used was principal components and the factors were rotated using the Varimax (orthogonal) method. An oblique (Promax) rotation was tried but since there was no clear difference in the interpretation the orthogonal method was chosen to summarize basic results. Five factors were included on the grounds that they represent important aspects of the causes of child labour and could conveniently be interpreted.

The 1–4 highest loadings on each factor were highlighted and the interpretation of factors is based on them. The first factor (F1) represented assistance to the family by the children since it was strongly associated with to get money, to pay for school fees, to take care of their siblings and to provide for the family parents. Hence, the money gotten was utilized for supporting the family in provision of basic needs such as school fees, food and other basic necessities. The second factor (F2) was associated with indiscipline, pregnancy and poverty. The third factor (F3) had high loadings from to earn living and to keep the children busy. The fourth factor (F4) was labeled as lack of role models, since lack of role models had the highest loadings on it. The fifth factor (F5) was interpreted to represent some kind of peer influence and family problems and violence.

The last column of Table 2 is the so called "unique factor" (UF) or "uniqueness". It represents the proportion of variances of each observed variable that is not accounted for by the common factors (F1–F5), i.e. variance "unique" to each variable. Hence, the proportion of the variance explained by the common factors, called the "communality", is 1–UF. For the various causes of child labour, the five factors conveyed 35.1% of the total variation of the set of 18 original variables. The first column on pair wise correlation between the presence of child labour and the various causes of child labour revealed that child labour was positively and significantly related to peer influence and pregnancy. In addition, child labour was established to be negatively and significantly related to earning of living, getting money, providing for the family, to keep them busy, and ignorance by parents.

4.3. Various Activities Carried by Children

4.3.1. Pair wise Correlation between Various Activities Carried by Children

The table on the activities undertaken by the children revealed a number of correlations. Table 4.3 shows that child labour is positively correlated to farm working and fetching water. Those correlations which were statistically different from zero were grouped into two broad categories namely, first correlation between house helps and hawkers, coffee picking, mining, fetching water, herding, casual washing clothes for people; second correlation between farm workers and the activity of coffee picking, fetching water, herding, business or hotels, taking care for siblings, and casual washing clothes for people. However, the activity of construction of houses was not significantly related to any of the other activities regarded as been performed by children.

4.3.2. Factor Analysis for Various Child Labour Activities

Table 4 shows the results of the factor analysis for the various child labour activities indicators. The initial factor extraction method used was principal components and the factors were rotated using the Varimax (orthogonal) method. An oblique (Promax) rotation was tried but since there was no clear difference in the interpretation the orthogonal method was chosen to summarize basic results. Five factors were included on the grounds that they represent important aspects of the child labour activities and could conveniently be interpreted. The 1–2 highest loadings on each factor are highlighted and the interpretation of factors is based on them. The first factor (F1) represents farm workers and hawkers. The second factor (F2) is associated with casual washing clothes for people and fetching of water. The third factor (F3) represents herding and mining related activities such as sand extraction, stone quarry and ballasts. The fourth factor (F4) represented coffee picking and operating business or being employed in hotels, since they had the highest loadings on it. The fifth factor (F5) is interpreted to represents house helps.

The last column of Table 4 is the so called "unique factor" (UF) or "uniqueness". It represents the proportion of variances of each observed variable that is not accounted for by the common factors (F1–F5), i.e. variance "unique" to each variable. Hence, the proportion of the variance explained by the common factors, called the "communality", is 1–UF. For the child labour activities, the five factors conveyed 42.9% of the total variation of the set of 11 original variables. The first column on pairwise correlation between the presence of child labour in school and the various activities children engage in revealed that the activities of farm working and fetching water were positively and significantly related to the presence of child labour. Hence, these activities predominantly indicate the presence of child labour.

4.4. Effects of Child labour

4.4.1. Pair Wise Correlation between Various Effects of Child Labour

The study further sought to examine the interrelationship between the various effects of child labour as shown in table 5 a number of interrelations were established; first lower academic performance was correlated with negative attitude towards education; second dropping out of schools was correlated with absenteeism, poor school attendance, lack

of concentration/participation in class, and decline in completion; third rape and sodomy was correlated with early/premarital/unwanted pregnancies, drug abuse, lack of concentration/participation in class; fourth failure to do assignments was correlated with absenteeism, negative attitude towards education, indiscipline, lack of concentration/participation in class, poor school attendance; fifth low enrolment was correlated with poor school attendance, negative attitude towards education, lack of concentration/participation in class; sixth indiscipline was correlated with lack of concentration/participation in class, decline in completion, negative attitude towards education, truancy, rape and sodomy, drug abuse; seventh low self esteem was correlated with bad morals and bad company peer influence; eighth bad morals, bad company and peer influence was correlated with drug abuse, failure to do assignments; ninth illiteracy increase was correlated with future life ruined; while repeating was not significantly related with any of the other variables representing the effects of child labour.

4.4.2. Factor Analysis for the Different Effects of Child Labour

Table 6 shows the results of the factor analysis for the different effects of child labour indicators. The initial factor extraction method used was principal components and the factors were rotated using the Varimax (orthogonal) method. An oblique (Promax) rotation was tried and since there was clear difference in the interpretation the promax method was chosen to summarize basic results. Ten factors were included on the grounds that they represent important aspects of the effects of child labour and could conveniently be interpreted. The 1–3 highest loadings on each factor are highlighted and the interpretation of factors is based on them. The first factor (F1) represents negative attitude towards education and poor school attendance. The second factor (F2) is associated with early/premarital/unwanted pregnancies and marriages, and rape and sodomy. The third factor (F3) represents lack of concentration/participation in class. The fourth factor (F4) was labeled as long run aftermath, since illiteracy increase and future life ruined has the highest loadings on it. The fifth factor (F5) is interpreted to represent bad morals, bad company and peer influence, drug abuse and failure to do assignments. The sixth factor (F6) represents absenteeism and drop out from school. The seventh factor (F7) is associated with lack of transparency since truancy and indiscipline has the highest loadings on it. The eighth factor (F8) has high loadings on lower academic performance and decline in completion. The ninth factor (F9) clearly represents low self esteem, while the tenth factor (F10) is associated with repeating.

The last column of Table 6 is the so called "unique factor" (UF) or "uniqueness". It represents the proportion of variances of each observed variable that is not accounted for by the common factors (F1–F10), i.e. variance "unique" to each variable. Hence, the proportion of the variance explained by the common factors, called the "communality", is 1–UF. For the different effects of child labour, the 10 factors conveyed 41.0% of the total variation of the set of 19 original variables. The first column on pairwise correlation between the presence of child labour and the different effects of child labour, indicated that child labour was significantly related to lack of concentration or participation of children in class, decline in completion and low enrolment. Hence, child labour affects the concentration/participation of children in class, leads to decline in completion and low enrolment of children in school. This implies that the effects of child labour are manifested before entry to school (low enrolment), during school (lack of concentration or participation in class) and at the exit of school (decline in completion). Hence, the complete cycle of education process is affected by child labour.

5. Conclusions and Recommendations

5.1. Conclusions

Based on the findings of the study, it was concluded that:

Child labour is positively and significantly related topeer influence and pregnancy. In addition, child labour was negatively and significantly related to earning of living, getting money, providing for the family, to keep them busy, and ignorance by parents.

The presence of child labour in school and the various activities children engage in revealed that the activities of farm working and fetching waterwere positively and significantly related to the presence of child labour. Hence, these activities predominantly indicated the presence of child labour.

The effects of child labour were manifested before entry to school (low enrolment), during school (lack of concentration or participation in class) and at the exit of school (decline in completion). Hence, the complete cycle of education process was affected by child labour.

On the causes of child labour five factors were deduced, the first factor represented assistance to the family by the children since it was strongly associated with to get money, to pay for school fees, to take care of their siblings and to provide for the family parents. Hence, the money gotten was utilized for supporting the family in provision of basic needs such as school fees, food and other basic necessities. The second factor (F2) was associated with indiscipline, pregnancy and poverty. The third factor had high loadings from to earn living and to keep them busy. The fourth factor was labeled as lack of role models, since lack of role models had the highest loadings on it. The fifth factor (F5) was interpreted to represents some kind of peer influence and family problems and violence. For the various causes of child labour, the five factors conveyed 35.1% of the total variation of the set of 18 original variables.

Concerning the various child labour activities five factors were established, the first factor represented farm workers and hawkers. The second factor was associated with casual washing clothes for people and fetching of water. The third factor represented herding and mining related activities such as sand extraction, stone quarry and ballasts. The fourth factor (F4) represented coffee picking and operating business or being employed in hotels, since they had the

highest loadings on it. The fifth factor was interpreted to represents house helps. For the child labour activities, the five factors conveyed 42.9% of the total variation of the set of 11 original variables.

On the effects of child labour ten factors were found, the first factor represented negative attitude towards education and poor school attendance. The second factor was associated with early/premarital/unwanted pregnancies and marriages, and rape and sodomy. The third factor (F3) represented lack of concentration/participation in class. The fourth factor was labeled as long run aftermath, since illiteracy increased and future life ruined had the highest loadings on it. The fifth factor was interpreted to represent bad morals, bad company and peer influence, drug abuse and failure to do assignments. The sixth factor represented absenteeism and drop out from school. The seventh factor was associated with lack of transparency since truancy and indiscipline had the highest loadings on it. The eighth factor had high loadings on lower academic performance and decline in completion. The ninth factor clearly represented low self esteem, while the tenth factor was associated with repeating. For the different effects of child labour, the 10 factors conveyed 41.0% of the total variation of the set of 19 original variables

5.2. Recommendations

Based on the findings of the study, the following recommendations were made;

- Parents should be more concerned and involved in their children's education, not only by playing their role in paying school dues but also through regular visits to the schools to liaise with the teachers about the students' behaviour and performance.
- Future studies in factor analysis should employ a structural equation model and path analysis diagrammatically drawn to establish the sequencing of the causes, activities and effects of child labour. This would identify the direct and indirect channels /ways.

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94

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Appendix

	Child labour in school	To earn living	To purchase illegal drugs	To take care of their siblings	They are orphans	To pay for school fees	To get money	To provide for the family parents irresponsible	To keep them busy	Poverty	Peer influence	Lack of guidance and counselling	Lack of role models	Indiscipline	Ignorance	Drop out from school	Pregnancy	Leisure activities like videos	Family problems
Child labour in school	7																		
To earn living	-0.2202*	—																	
To purchase illegal drugs	0.0749	-0.0717	-																
To take care of their siblings	0.0769	0.1285	-0.1249	-															
They are orphans	-0.0969	-0.0626	-0.0874	0.1142	-														
To pay for school fees	0.0769	0.1285	-0.1249	0.5836*	0.1142	-													
To get money	-0.2205*	0.0483	-0.1899*	0.5135*	0.1506	0.5135*	~												

	Child labour in school	To earn living	To purchase illegal drugs	To take care of their siblings	They are orphans	To pay for school fees	To get money	To provide for the family parents irresponsible	To keep them busy	Poverty	Peer influence	Lack of guidance and counselling	Lack of role models	Indiscipline	Ignorance	Drop out from school	Pregnancy	Leisure activities like videos	Family problems /violence
To provide for the family parents irresponsible	-0.2267*	0.1798*	-0.1699	0.2459*	0.1548	0.3571*	0.4817*	-											
To keep them busy	-0.3332*	0.5237*	-0.078	-0.0256	-0.0328	-0.0256	-0.039	0.1189	-										
Poverty	0.1574	-0.1131	0.1344	-0.1295	0.1195	-0.2106*	-0.1522	-0.1468	-0.1316	-									
Peer influence	0.1912*	-0.1549	0.0311	0.0484	0.0477	-0.0407	-0.0742	-0.1821*	-0.0811	0.2349*	-								
Lack of guidance and counselling	0.048	-0.0306	-0.078	-0.0256	-0.0328	-0.0256	-0.039	-0.0547	-0.016	0.1216	0.0581	-							

DOI No.:10.24940/theijhss/2019/v7/i1/HS1901-032

96

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	Child labour in school	To earn living	To purchase illegal drugs	To take care of their siblings	They are orphans	To pay for school fees	To get money	To provide for the family parents irresponsible	To keep them busy	Poverty	Peer influence	Lack of guidance and counselling	Lack of role models	Indiscipline	Ignorance	Drop out from school	Pregnancy	Leisure activities like videos	
Lack of role models	0.0769	-0.0489	-0.1249	-0.041	0.1142	-0.041	-0.0623	0.2459*	-0.0256	0.1136	-0.1298	-0.0256	-						
Indiscipline	0.1169	-0.0744	-0.1899*	-0.0623	-0.0798	-0.0623	-0.0948	-0.0563	-0.039	-0.3203*	-0.1974*	-0.039	0.0816	-					
Ignorance	-0.2650*	0.0678	-0.033	-0.0559	0.1810*	-0.0559	0.1332	0.0491	-0.0349	0.0812	-0.1771*	0.2115*	-0.0559	-0.085	←				
Drop out from school	0.0591	-0.0376	-0.0959	-0.0315	-0.0403	-0.0315	-0.0479	-0.0672	-0.0197	0.1495	0.0144	-0.0197	-0.0315	-0.0479	0.1591	-			
Pregnancy	0.2215*	-0.1728	-0.0689	-0.1448	0.1855*	-0.1448	-0.1612	0.2636*	-0.0905	0.3446*	0.2736*	-0.0905	-0.0593	0.3712*	0.1976*	-0.0017	-		
Leisure activities like videos	0.0338	-0.0215	-0.0549	-0.018	-0.0231	-0.018	-0.0274	-0.0385	-0.0113	0.0856	-0.0571	-0.0113	0.4401*	-0.0274	-0.0246	-0.0139	-0.0637	-	
Family problems /violence	0.1169	-0.1136	0.2133*	-0.0952	-0.1219	-0.0952	-0.1448***	-0.1472	-0.0595	0.0019	-0.3015*	-0.0595	6600.0	-0.1448	-0.0502	-0.0731	-0.2933*	-0.0419	_

Table 1: Pairwise Correlation between Various Causes of Child Labour

Variable	Factor1	Factor2	Factor3	Factor4	Factor 5	Uniqueness (UF)
to earn living	0.1097	0.0468	0.6671	-0.0425	-0.0373	0.5376
to purchase illegal drugs	-0.2113	0.1729	-0.1401	-0.238	-0.1637	0.8224
to take care of their siblings	0.6723	0.0171	-0.0099	-0.0816	0.0574	0.5376
they are orphans	0.207	0.2124	-0.0441	0.151	0.1296	0.8705
to pay for school fees	0.7107	-0.0206	0.0172	-0.0522	-0.015	0.4912
to get money	0.7434	0.0493	0.0112	0.0105	0.0185	0.4444
to provide for the family parents irresponsible	0.5507	0.0665	0.2263	0.2758	-0.0821	0.5584
to keep them busy	-0.0367	-0.0104	0.63	-0.018	-0.0148	0.601
poverty	-0.2345	0.5921	-0.1708	0.0842	0.2286	0.5059
peer influence	-0.0712	0.0394	-0.1929	-0.1978	0.5953	0.5627
lack of guidance and counseling	-0.0481	0.1519	0.0168	0.0021	0.1211	0.9597
lack of role models	-0.0187	0.0335	-0.0491	0.6709	-0.0567	0.5428
indiscipline	-0.0619	-0.5585	-0.0087	0.1606	-0.0524	0.6557
ignorance	0.0392	0.2678	0.1028	0.0463	0.0054	0.914
drop out from school	-0.0645	0.1011	0.0035	0.0063	0.1346	0.9675
pregnancy	-0.1986	-0.6741	-0.143	-0.0824	0.3161	0.379
leisure activities like videos	-0.0625	0.0572	-0.0482	0.479	0.0017	0.761
family problems /violence	-0.1577	0.1834	-0.1479	-0.118	-0.574	0.5762
Variance (total communality 6.31)	1.97	1.72	0.86	0.87	0.89	11.69
% of total variance explained ALL 5 factors = 35.1%	10.9%	9.5%	4.8%	4.9%	5.0%	64.9%

Table 2: Factor Analysis, Varimax Orthogonal Rotation of the Child Labour Causes

Vol7 Issue 1

	Child labour in school	Househelps	Farm workers	Hawkers	Construction of houses	Coffee picking	Mining	Fetching water	Herding	Business or hotels	Take care for siblings	Casual washing clothes for people
	당 =			_	ō				_	В	Tał	7 5
Child labour in school	1											
Househelps	0.1575	1										
Farm workers	0.3832*	-0.0384	1									
Hawkers	0.0579	0.3334*	-0.4383*	1								
Construction of												
houses	0.0591	-0.0385	-0.0144	-0.0547	1							
Coffee picking	0.0146	0.2066*	-0.2471*	0.2830*	-0.0385	1						
Mining	0.0726	-0.2052*	-0.0699	-0.0579	-0.0591	-0.0623	1					
Fetching water	0.2342*	-0.2117*	0.3567*	-0.2171*	0.1361	-0.0702	-0.2342*	1				
Herding	0.1444	0.1949*	0.3054*	-0.2300*	-0.1016	-0.3229*	0.3219*	-0.0182	1			
Business or hotels	0.1227	0.042	0.1767*	-0.1699	-0.0751	-0.3214*	-0.1227	0.1524	0.1238	1		
Take care for siblings	-0.0972	-0.1426	-0.2426*	-0.0547	-0.0242	-0.0385	-0.0591	-0.0959	-0.1016	-0.0751	1	
Casual washing	0.07,2	3.1.123	0.2 120	0.0017	0.02.12	0.0000	0.0071	3.3737	0.1010	0.0701	•	
clothes for people	0.111	-0.2680*	0.1875*	-0.1029	-0.0455	-0.2680*	-0.111	0.4740*	-0.1910*	-0.1411	-0.0455	1

Table 3: Pairwise Correlation between Various activities carried by Children

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness (UF)
house helps	-0.0472	-0.2286	0.0311	-0.0677	0.6491	0.5177
farm workers	0.6300	0.1859	0.1721	0.1552	0.0371	0.5095
hawkers	-0.4944	-0.0288	-0.1297	-0.2162	0.3564	0.5503
construction of houses	0.0609	-0.0074	-0.1098	-0.0242	-0.0609	0.8444
coffee picking	-0.1248	-0.1915	-0.2224	-0.6267	0.1457	0.4778
mining	-0.1417	-0.1150	0.5221	-0.0586	-0.2782	0.6031
fetching water	0.4579	0.4748	-0.1970	0.0503	-0.0535	0.4805
herding	0.2661	-0.1538	0.6214	0.2356	0.1427	0.442
business or hotels	0.2472	-0.1511	-0.0973	0.4814	0.0766	0.6283
take care for siblings	-0.1866	-0.0799	-0.1360	0.0643	-0.2111	0.7998
casual washing clothes for people	0.0888	0.7329	-0.0881	0.0572	-0.1390	0.4232
Variance (total communality 4.72)	0.94	1.10	1.11	0.89	0.68	6.28
% of total variance explained ALL 5 factors =42.9 %	8.5%	10.0%	10.1%	8.1%	6.2%	57.1%

Table 4: Factor Analysis, Varimax Orthogonal Rotation for Child Labour Activities

DOI No.:10.24940/theijhss/2019/v7/i1/HS1901-032

Vol7 Issue 1

ISSN 2321 - 9203

	Child labour in school	Lower academic performance	Drop out of schools	Repeating	Early/premarital/unwante d pregnancies and marriages	Absenteeism	Poor school attendance	Lack of concentration/participatio n in class	Low self esteem	Bad morals and bad company peer influence	Failure to do assignments	Drug abuse	Rape and sodomy	Truancy	Indiscipline	Negative attitude towards education	Decline in completion	Low enrolment	Illiteracy increase	Future life ruined
Child labour in school	-																			
Lower academic performance	0.0762									_										
Drop out of schools	-0.1022	-0.0707	_																	
Repeating	0.0338	0.073	0.1162	-																
Early/premarit al/unwanted pregnancies and marriages	-0.0273	0.1067	0.1368	-0.0198	-															
Absenteeism	-0.011	0.0442	-0.2159*	-0.0582	0.0166	-														

	Child labour in school	Lower academic performance	Drop out of schools	Repeating	Early/premarital/u nwanted pregnancies and marriages	Absenteeism	Poor school attendance	Lack of concentration/part icipation in class	Low self esteem	Bad morals and bad company peer influence	Failure to do assignments	Drug abuse	Rape and sodomy	Truancy	Indiscipline	Negative attitude towards education	Decline in completion	Low enrolment	Illiteracy increase	Future life ruined
Poor school attendance	0.0089	-0.0792	-0.2564*	-0.0441	-0.1102	-0.2802*	1													
Lack of concentration/ participation in class	0.5703*	-0.0579	-0.3382*	-0.1338	-0.3345*	-0.1614	0.1579	1												
Low self esteem	-0.0452	2000'0	-0.0713	-0.018	-0.0451	0.0446	0.0016	-0.2163*	1											
Bad morals and bad company peer influence	-0.0972	-0.0841	-0.0118	-0.0139	-0.0346	0.1248	-0.077	-0.1212	0.2351*	1										
Failure to do assignments	0.048	-0.0254	0.034	-0.0113	-0.0282	0.1936*	-0.0626	-0.0529	-0.0256	0.3968*	1									
Drug abuse	-0.0674	0.0558	0.1419	-0.0161	0.3848*	-0.0194	-0.0893	-0.2709*	-0.0365	0.2688*	0.3393*	1								
Rape and sodomy	0.048	-0.0254	0.034	-0.0113	0.5680*	0.0555	-0.0626	-0.1900*	-0.0256	-0.0197	-0.016	0.3393*	-							

	Child labour in school	Lower academic performance	Drop out of schools	Repeating	Early/premarital/unwant ed pregnancies and marriages	Absenteeism	Poor school attendance	Lack of concentration/participati on in class	Low self esteem	Bad morals and bad company peer influence	Failure to do assignments	Drug abuse	Rape and sodomy	Truancy	Indiscipline	Negative attitude towards education	Decline in completion	Low enrolment	Illiteracy increase	Future life ruined
Truancy	0.0591	0.0217	-0.0118	-0.0139	-0.0346	0.1248	-0.077	-0.2336*	-0.0315	-0.0242	-0.0197	-0.028	-0.0197	1						
Indiscipline	0.048	-0.0254	-0.097	-0.0113	-0.0282	0.1936*	-0.0626	-0.1900*	-0.0256	-0.0197	-0.016	-0.0228	-0.016	0.3968*	-					
Negative attitude towards education	0.1169	-0.3188*	-0.2360*	-0.0274	-0.0686	-0.2012*	0.5516*	0.2050*	-0.0623	-0.0479	-0.039	-0.0555	-0.039	-0.0479	-0.039	1-				
Decline in completion	-0.2033*	-0.1282	0.2353*	-0.0161	-0.0402	-0.1178	-0.0893	-0.2709*	-0.0365	-0.028	-0.0228	-0.0325	-0.0228	-0.028	-0.0228	-0.0555	-			
Low enrolment	-0.2346*	0.073	0.1162	-0.0079	-0.0198	-0.0582	0.1799*	-0.1338	-0.018	-0.0139	-0.0113	-0.0161	-0.0113	-0.0139	-0.0113	-0.0274	-0.0161	-		
Illiteracy increase	0.0338	-0.1088	0.1162	-0.0079	-0.0198	-0.0582	-0.0441	-0.1338	-0.018	-0.0139	-0.0113	-0.0161	-0.0113	-0.0139	-0.0113	-0.0274	-0.0161	-0.0079	1	
Future life ruined	0.048	-0.1544	0.034	-0.0113	-0.0282	-0.0827	-0.0626	-0.0529	-0.0256	-0.0197	-0.016	-0.0228	-0.016	-0.0197	-0.016	-0.039	-0.0228	-0.0113	0.7043*	1

Table 5: Pairwise Correlation between Various Effects of Child Labour

Variables	Factor 1	Factor 2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8	Factor9	Factor10	Uniqueness (UF)
lower academic performance	-0.21	0.0155	-0.0243	-0.0921	-0.0567	-0.0104	-0.002	0.4979	0.0124	0.026	0.6983
drop out of schools	-0.2057	-0.0178	0.2834	0.0093	0.0473	-0.3585	-0.0505	-0.072	-0.1225	0.0369	0.5511
repeating	0.0788	-0.0839	0.2236	-0.0204	-0.0267	-0.0296	-0.0648	0.0984	-0.0413	0.3105	0.8952
early/premarital/unwanted pregnancies and marriages	-0.0147	0.7274	0.1429	-0.0152	-0.0629	0.0022	-0.0449	0.0468	-0.0168	-0.0034	0.4317
absenteeism	-0.1872	0.0252	0.1218	-0.0276	0.0871	0.5836	0.0145	-0.0272	-0.0407	0.0047	0.6021
poor school attendance	0.7234	-0.0277	0.0436	-0.0191	-0.0123	-0.0367	-0.0199	0.0496	0.0223	-0.0376	0.4591
lack of concentration/participation in class	-0.0261	-0.1817	-0.7691	-0.0539	-0.028	-0.0263	-0.1368	0.0202	-0.1385	-0.0522	0.3584
low self esteem	-0.0137	-0.0459	0.2355	-0.0172	-0.0008	0.015	-0.0646	0.018	0.5078	-0.0105	0.7295
bad morals and bad company peer influence	-0.0151	-0.0866	0.0684	-0.0135	0.5336	0.0171	-0.0313	-0.0524	0.2305	-0.0144	0.622
failure to do assignments	0.009	-0.0849	-0.0172	-0.0029	0.6281	0.1047	-0.0358	-0.0217	-0.1116	0.0043	0.6124
drug abuse	0.0071	0.3889	0.0215	-0.0155	0.4749	-0.1594	0.0511	0.06	-0.0371	-0.0157	0.5278
rape and sodomy	0.0225	0.6814	0.0737	-0.0037	-0.0522	0.084	-0.056	-0.0561	-0.0224	-0.0279	0.548
truancy	-0.0154	-0.0683	0.1343	-0.0189	-0.0236	-0.0333	0.5517	0.0242	-0.0324	-0.0143	0.6824
indiscipline	0.0112	-0.0465	0.1297	-0.0087	-0.0268	0.0826	0.5085	-0.0189	-0.0443	-0.0193	0.6829
negative attitude towards education	0.6999	0.0402	-0.0336	-0.0297	0.0184	0.0073	0.015	-0.2556	-0.0364	0.0649	0.4656
decline in completion	-0.072	-0.0741	0.2764	-0.1111	-0.0831	-0.1213	-0.0551	-0.318	-0.0289	-0.0699	0.7364
low enrolment	0.1854	-0.0709	0.2433	0.0207	0.0139	0.0157	-0.0585	0.2002	-0.0816	-0.1168	0.8338
illiteracy increase	-0.0063	-0.0148	0.0847	0.7736	-0.0075	-0.0067	-0.0143	-0.0154	-0.0123	0.0067	0.3855
future life ruined	-0.0402	-0.0082	-0.014	0.7763	-0.0119	-0.0157	-0.0056	-0.0356	-0.004	-0.0167	0.3843
Variance (total communality 7.79)	1.08	1.02	0.81	1.23	1.24	0.85	0.63	0.57	0.27	0.10	11.21
% of total variance explained ALL 10 factors = 41.0%	5.7%	5.4%	4.3%	6.5%	6.5%	4.5%	3.3%	3.0%	1.4%	0.6%	59.0%

Table 6: Factor Analysis, Promax Oblique Rotation for Effects of Child Labour

Vol7 Issue 1