

CHAPTER – 5

ANALYSIS AND INTERPRETATION

- 5.1 Introduction
- 5.2 Analysis and Interpretation
- 5.3 Distribution of Respondent
- 5.4 Distribution of Family Members of Respondent
- 5.5 Working Members of Surveyed Household
- 5.6 Child Labour Distribution
- 5.7 Family Size in Household
- 5.8 Occupation of Parent/Guardian of Children
- 5.9 Monthly Income of Each Sampled Household
- 5.10 Type of Dwelling House
- 5.11 Religion of the Surveyed Household
- 5.12 Education of Parent/Guardian
- 5.13 Education of Child Labour
- 5.14 Electricity facility, Pure Drinking Water Facility and Sanitary Facility
- 5.15 Road and Communication Facility in Coolie Line
- 5.16 Occupational Area of Child Labour
- 5.17 Reasons of Child Labour
- 5.18 Health Status of Child Labour
- 5.19 Binomial Logistic Regression Analysis
 - 5.19 (A) Binomial Tables of Independent Variables
- 5.20 Conclusion

CHAPTER – 5

ANALYSIS AND INTERPRETATION

5.1: INTRODUCTION

Prime cause of child labour is the economic crisis along with surrounding social disorder of the household. Inadequacy of education facility, tradition and ignorance on child potentialities are the basic causes of child labour along with economic crisis (UNICEF, 1997). Economic development of the nation is based on human capital. Foundation of human capital is based on development of child potentiality through school education (Hasan, 1998). Various socio-economic parameters of the household are responsible for deprivation of child development in proper manner. This chapter analyse and interprets the facts, figures, areas of child labour among tea tribe community through SPSS (16.0 version) statistical tools. Tea tribe community is the inhabitant of tea estates working as coolie in the garden is studying with special reference to socio-economic factors in the study area. It also includes the findings related to the practice of child labour. Tea tribe community are those who are migrated from tribal belt of other states for doing nursery works, fertilizing, tea plantation, plucking tea leaves, loading and unloading of tea leaves of tea estates.

5.2: ANALYSIS AND INTERPRETATION

The following tables and diagrams reflect the socio-economic factors which focused the area, causes and magnitude of child labour (age group 6-14) among tea tribe community living in tea estates in Kaliabor subdivision of Nagaon District. Census 2011 states that the elementary school admission age is started from 6 years and ended in 14 years at district level. With reference to free and compulsory elementary education equal to all genders, races, complexions and income levels of children in the age of 6-14 years [Article: 21(A) (K) of Indian Constitution and Sarva Siksha Aviyan Mission, 2010], the study considers children age in between 6-14 years. So, children employed in between

the age of 6-14 years by depriving school education are known as child labour. This chapter reveals the probability of statistical significance of socio-economic variables like distribution of respondents in age and sex, occupation, monthly income of household, education, religion, family size, basic facilities like drinking water, electricity facility, sanitary facility, road and communication in different block level in terms of Pearson Chi-square test. The study reflects the occurrence of dichotomous dependent variable in terms of odd ratio of binomial logistic regression based on various independent variables. Probability of statistical significance of reasons of child labour is explained by regression coefficient.

5.3: DISTRIBUTION OF RESPONDENTS

Total sample respondent as per confidence level mentioned in methodology is 620 scattered among three blocks, namely Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block. The respondent is the head of the family member of tea tribe household. The respondent must have children in the age group of 6-14 years.

Table: 5.1 Distribution of Respondents (In Sex and Age)

Age	Bajiagaon			Kaliabor			Pachim Kaliabor			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
20-24	0	1	1	1	1	2	0	0	0	1	2	3
25-29	5	0	5	7	5	12	0	4	4	12	9	21
30-34	49	26	75	57	12	69	39	14	53	145	52	197
35-39	49	17	66	51	5	56	51	14	65	151	36	187
40-44	22	7	29	25	4	29	37	9	46	84	20	104
45-49	10	4	14	9	4	13	26	3	29	45	11	56
50-54	2	2	4	13	5	18	19	0	19	34	7	41
55-59	6	0	6	0	1	1	4	0	4	10	1	11
Total	143	57	200	163	37	200	176	44	220	482	138	620

Source: Field Investigation during 2016- 2017

The table: 5.1 explain the number of respondent on the basis of sex and age group. The reference of the Age group of respondent is on the basis of ST table: 7 of Census 2011 which presents marital status, age and sex composition of ST people in rural and urban area at State level.

The table: 5.1 stated that highest number of respondent 197 is getting in the age group of 30-34 years. The minimum number of respondent is 3 in the age group of 20-24 years who have the infants but have less number of children. The reason is that respondent must have the children in the age group of 6-14 years. So, number of respondent is highest in the age group 30-44 years.

Table: 5.1(A) Distribution of Respondent with Child Labour

Age	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Total R	Child labour	Total R	Child Labour	Total R	Child Labour	Total R	Child Labour
20-24	1	0	2	0	0	0	3	0
25-29	5	2	12	0	4	0	21	2
30-34	75	81	69	51	53	41	197	173
35-39	66	70	56	39	65	52	187	161
40-44	29	40	29	19	46	30	104	89
45-49	14	13	13	7	29	13	56	33
50-54	4	3	18	11	19	11	41	25
55-59	6	6	1	1	4	4	11	10
Total	200	215	200	128	220	151	620	494

Source: Field Investigation during 2016- 2017 ('R' denotes Respondent)

In table: 5.1(A) reflects the child labour against number of respondent. The table shows that the respondent in the age group of 20-24 years have no child labour. The highest number of child labour 173 is found in the age group of respondent 30-34 years. In Bajiagaon Block and Kaliabor Block, highest number of child labour is 81 and 51 respectively found in the age group of respondent 30-34 years. In Pachim Kaliabor Block, the highest number of child labour 52 is found in the age group of respondent 35-39 years. From this table it is clear that the child labour is highest in 30-34 age groups of head of the family (i.e. respondent). The reason is most of the children among tea tribe people attended school irregularly observed in field investigation and when become workable in the average age 12+ (Table; 5.18) then leave the school and employed. So, maximum number of child labour 173 and 161 are lying in the age group of respondent 30-34 and 35-39 years respectively.

Table: 5.1(B) Respondents in Sample Survey (in sex and percentage)

Gender	Bajiagaon	%	Kaliabor	%	Pachim Kaliabor	%	Total	%
Male	143	71.5	163	81.5	176	80	482	77.7
Female	57	28.5	37	18.5	44	20	138	22.3
Total	200	100	200	200	220	100	620	100

Source: Field Investigation during 2016- 2017

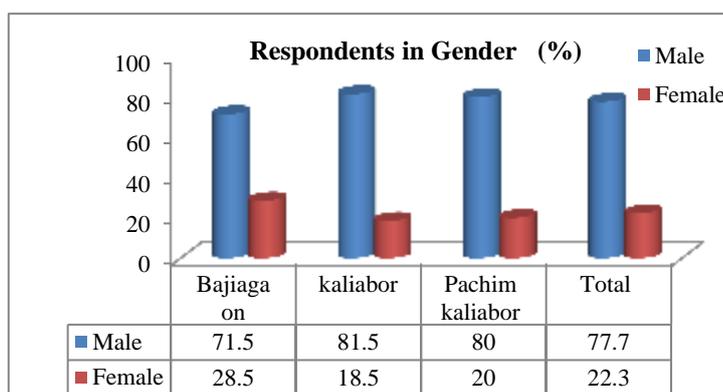


Figure: 5.1 Respondents in Gender

Table 5.1(B) and figure: 5.1 are derived from table: 5.1 used to show gender wise percentage of respondents. It is seen that male respondent is highest (77.7%) than female (22.3%) respondent. The reason is male comes forward to respond as head of the family member in male dominated society.

Table: 5.1(C) Chi-square Test of Surveyed Respondent

Age group	Bajiagaon	Kaliabor	Pachim Kaliabor	Total	Pearson Chi-square Test
20-24	1	2	0	3	$X^2=38.803$ df=14 P=0.000
25-29	5	12	4	21	
30-34	75	69	53	197	
35-39	66	56	65	187	
40-44	29	29	46	104	
45-49	14	13	29	56	
50-54	4	18	19	41	
55-59	6	1	4	11	
Total	200	200	220	620	

Source: Field Investigation during 2016- 2017

Table: 5.1(C) reflects the statistical significance of distribution of respondent at different block level. Pearson chi-square test focused that distribution of respondent (i.e. head of the family) on age and sex are statistically significant at three different

block because $P=.000$ at $X^2 =38.803$ and $df=14$. So, the strength of association of distribution of respondent on age and sex at different block is very strong.

5.4: DISTRIBUTION OF FAMILY MEMBERS OF RESPONDENT

Family members of respondent refer to the composition of surveyed household member. A household member composed of adults, children, infants and elderly people.

Table: 5.2 Distribution of Family Members (in Average and Total)

Family Member		Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
		Average	Total	Average	Total	Average	Total	Average	Total
Adults	Total	2.9	572	2.7	534	2.7	595	2.7	1701
	Male	1.6	325	1.3	265	1.4	311	1.5	901
	Female	1.2	247	1.3	269	1.3	284	1.3	800
Children	Total	1.4	286	1.4	287	1.1	236	1.3	809
	Male	.9	171	.9	180	.7	148	.8	499
	Female	.6	115	.5	107	.4	88	.5	310
Infants	Total	.5	105	.7	141	.7	159	.7	405
	Male	.2	42	.3	60	.4	77	.3	179
	Female	.3	63	.4	81	.4	82	.4	226
Elderly People	Total	.3	62	.1	22	.0	8	.1	92
	Male	.2	31	.1	10	.0	3	.1	44
	Female	.2	31	.1	12	.0	5	.1	48
Total family member		5.1	1025	4.9	984	4.5	998	4.9	3007

Source: Field Investigation during 2016- 2017

The above table: 5.2 explain the member composition of sample data (620) in the study area. The total household member is 3007 and average household member is 4+. The highest household member (1025) is found in Bajiagaon Block where average household member is 5+ and lowest family member (984) is found in Kaliabor Block where average household member is about 5. The average household member in surveyed household is 5. Household member is rest on fertility and literacy rate of tea tribe community.

5.5: WORKING MEMBERS OF SURVEYED HOUSEHOLD

In the investigation, it is found that the households have the working members belongs to adults and children as shown in table: 5.3.

Table: 5.3 Working Member in Surveyed Household

Working Family Member		Bajiagaon			Kaliabor			Pachim Kaliabor			Total		
		M	T	%	M	T	%	M	T	%	M	T	%
Adults	Male	1.6	325	64	1.3	265	54	1.4	308	67	1.4	898	62
	Female	.9	183	36	1.1	222	46	.7	155	33	.9	560	38
	Total	2.5	508	100	2.4	487	100	2.1	463	100	2.4	1458	100
Children	Male	.6	132	61.4	.4	89	69.5	.4	95	63	.5	316	64
	Female	.4	83	38.6	.2	39	30.5	.3	56	37	.3	178	36
	Total	1.1	215	100	.6	128	100	.7	151	100	.8	494	100

Source: Field Investigation during 2016- 2017 ('M' denotes Mean, 'T' denotes Total)

This table: 5.3 explain the distribution of income earner of the household necessary to survival. In adult group the total income earner is 1458. Total male adult income earner is 898 (i.e. 62%) and female adult income earner is 560 (i.e. 38%). Male adult income earner is more than female adult income earner because the male adult can leave from home to do economic activities which is not possible for female adults (observed in field survey). Female adults have to take responsibility of household activities like infant care, old people care and patient care. Pregnant ladies do not go out to work.

The table: 5.3 also focus the income earner in children category in the age group 6-14 years where average household child income earner (i.e. child labour) is 0.8. It is found that 494 is the total number of child income earner in the surveyed household. The male children income earner is 64% and female children income earner is 36%. It is observed from field investigation that male child go out of the house in search of economic activities and female child can't go out of home for doing economic activities. Female child is preferred to keep at home for serving household work. Highest number of children income earner is 215 found in Bajiagaon block. The reason is 91% surveyed household have up to Rs. 2000/- monthly income [table: 5.7 (A)] in Bajiagaon block. The lowest number of children income earner is 128 found in Kaliabor block, because 88% surveyed household have more than Rs. 2000/- monthly income [table:5.7(A)].

Table: 5.3(A) Adult Worker & Children Worker from Total Adult & Total Children

Member	Bajiagaon			Kaliabor			Pachim Kaliabor			Total		
	Worker	Total	%	Worker	Total	%	Worker	Total	%	Worker	Total	%
Adults	508	572	88.9	487	534	91.2	463	595	77.8	1458	1701	85.2
Children	215	286	75.2	128	287	44.6	151	236	63.9	494	809	61.1

Source: Field Investigation during 2016- 2017

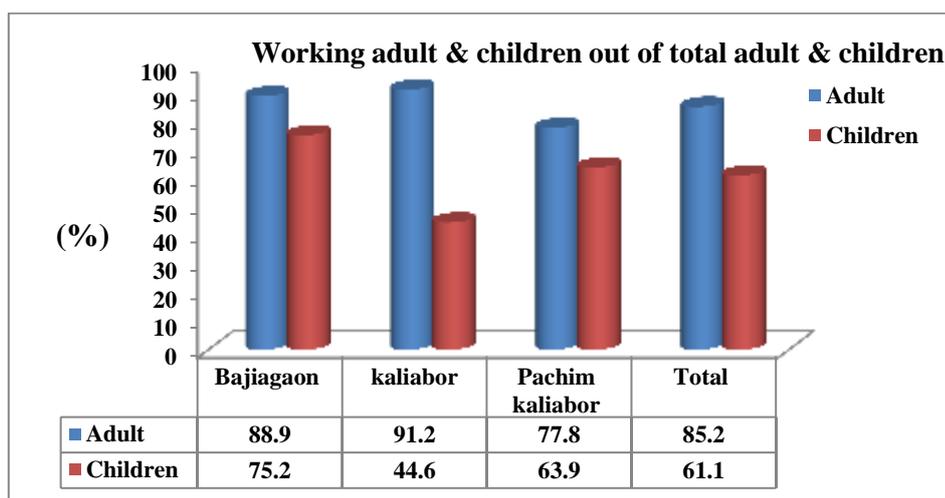


Figure: 5.2 Working adult & children out of total adult & children

Table: 5.3(A) and figure: 5.2 expressed that 1458 (i.e. 85.2%) are the total working adults out of 1707 Adults in surveyed household and children income earner are 494 (i.e. 61.1%) out of total children 809 in surveyed household. Highest percentage (91.2%) of adult worker is found in Kaliabor Block and so, lowest percentage (i.e. 44.6%) children income earner is in Kaliabor block in comparison to other two blocks. Children income earner is the child labour in surveyed household.

5.6: CHILD LABOUR DISTRIBUTION

Child labour distribution among surveyed household are shown in table 5.4. It is found that the household have one child labour, two child labours and three child labours. Household having child labour one is denoted by 'a', household having child labour two is denoted by 'b' and household having child labour denoted by 'c'.

Table: 5.4 Child Labour Distribution in the sample Household

Child labour	Bajiagaon		Kaliabor		Pachim Kaliabor		Total HH	Total Child labour
	HH	Child labour	HH	Child labour	HH	Child labour		
*a	148	148	118	118	151	151	417	417
**b	32	64	5	10	0	0	37	74
***c	1	3	0	0	0	0	1	3
Total	181	215	123	128	151	151	455	494

(Note: *a=Single child labour, **b= Two child labour, ***c= 3 Child labour, HH= Household)

Source: Field Investigation during 2016- 2017.

In the above table: 5.4, it is found that 417 households have the single child labour and 37 households have two child labour out of 620 surveyed household. The household having three child labours is found 1 in Bajiagaon Block. Total household having child labour is 455 (i.e. 73.4%) out of 620 total surveyed household. Bajiagaon has highest 181 households have 215 numbers of child labour. The reason is found that 91% of household have monthly income up to Rs. 2000/- in Bajiagaon Block shown in income table: 5.7(A). Kaliabor has only 123 household having child labour, because highest 88% household have more than Rs. 2000/- monthly income [table: 5.7(A)]. In Pachim Kaliabor block, 151 household has the child labour because 81.4% household has more than Rs. 2000/- monthly income [table: 5.7(A)].

5.7: FAMILY SIZE IN HOUSEHOLD

The family size in 620 surveyed household is explained in table: 5.5. It is the member composition of sample household.

Table: 5.5 Family Size in Household

Member in HH	Bajiagaon	Kaliabor	Pachim Kaliabor	Total
1	0	0	0	0
2-3	22	14	31	67
4-6	146	177	187	510
7-10	31	9	2	42
11+	1	0	0	1
Total	200	200	220	620

Source: Field Investigation during 2016- 2017

Table: 5.5 explain the family size in household with reference to family member composition table HH-4 (Household-4) of 2011 Census.

Household table- 4 of 2011 Census presents data on family member composition in each sample household as 1 member, 2-3, 4-6, 7-10 and 11+ members. As per Indian Sociologist (like Karve and Desai, I. P.) view point the family having parent and their children are said as nuclear family and the family having parent, uncle, aunt, children and spouse of children are said as Joint family.

In table: 5.5 of family size in household, it is reflected that single family member respondent is found zero because as per methodology, the respondent must have children. The family member range 4-6 respondent is found highest (510). The reason is tea management authority constructed quarters for 4-6 member accommodation. Moreover, family size is based on fertility rate of the household member. The family size 11+ has only one household found in Bajiagaon Block and others two blocks have not family member in this group. It is due to household accommodation problem. The mean size of family member is 4+ shown in table: 5.2.

5.8: OCCUPATION OF PARENT/GUARDIAN OF CHILDREN

Following table: 5.6 state the occupation of parent/guardian of children in 620 surveyed household represents the occupation of head of the family. It is seen that 21% father/male guardian are wage earner. Field survey reflected that wage earners do not work regularly in every day for their family and so they have nominal share in household income. They preferred to work outside tea estate. Some days, they back to home with bare work. Likewise, 41.9% mother/female guardians are engaged in household work. They work in house to support their family including infants and eldest infirmed sick members. They do not have share in household income. The father/ male guardian like to work outside tea estate due to earning higher income in a day. Daily income earned in the garden is comparatively less than wage earner. However, wage earners activities are not determined. It is irregularly regular.

Table: 5.6 Occupation of Parent/guardian of surveyed Children

Parent/Guardian Occupation		Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
		Count	%	Count	%	Count	%	Count	%
Father/male guardian occupation	Wage earner for day's work	63	31.5	27	13.5	40	17.4	130	21.0
	Unorganized sector/Private sector	2	1.0	--	--	--	--	2	.3
	Household work	1	.5	--	--	--	--	1	.2
	Seasonal employee in Small Tea Grower	2	1.0	--	--	--	--	2	.3
	Farmer : own land	2	1.0	--	--	--	--	2	.3
	Farmer: other land	26	13.0	3	1.5	--	--	29	4.7
	Employed in tea estate: Seasonal	35	17.5	--	--	--	--	35	5.6
	Employed in tea estate: Whole year	69	34.5	170	85.0	180	82.6	419	67.6
	Total	200	100.0	200	100.0	220	100.0	620	100.0
Mother/female guardian occupation	Household work	68	34.0	54	27.0	138	62.7	260	41.9
	Unorganized sector/Private sector	2	1.0	--	--	--	--	2	.3
	Wage earner	3	1.5	--	--	--	--	3	.5
	Farmer: Other land	4	2.0	2	1.0	--	--	6	1.0
	Employed in tea estate: Seasonal	65	32.5	--	--	15	6.9	80	13.0
	Employed in tea estate: Whole year	58	29.0	144	72.0	67	30.9	269	43.3
	Total	200	100.0	200	100.0	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017

The table: 5.6 explain that Parent/Guardians are mostly employed in tea estate. They are employed less in other than tea estate. Father/male guardian of child employed in tea estate in permanent link is 67.7% and mother/female guardian of child is employed 43.3% in permanent link in tea estate. The reason is they are the inhabitant of coolie line in the tea estate. The quarters are provided by tea management authority for coolie. However, quarters are provided to tea tribe people who have at least one family member working in tea garden.

Table: 5.6(A) Cross Tabulation of Father/Male Guardian Occupation

Father/Male Guardian Occupation	Area	Bajiagaon	Kaliabor	Pachim Kaliabor	Total
	Wage earner for day's work	63	27	40	130
	Unorganized sector/Private sector	2	--	--	2
	Household work	1	--	--	1
	Seasonal employee in Small Tea Grower	2	--	--	2
	Farmer - own land	2	--	--	2
	Farmer-other land	26	3	--	29
	Employed in tea estate-Seasonal	35	--	--	35
	Employed in tea estate-Whole year	69	170	180	419

Source: Field Investigation during 2016- 2017

Table: 5.6(A) reflects the impact of father/male occupation at three different blocks and hence, the child labour is different at Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block. The statistical significance of occupation of father/male guardian at different block is shown in the following Pearson Chi-square table.

Chi-Square Test: Father/Male Guardian Occupation

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	197.613(a)	14	.000
Likelihood Ratio	212.109	14	.000
Linear-by-Linear Association	27.429	1	.000
No. of Valid Cases	620		

(a) 12 cells (50.0%) have expected count less than 5. The minimum expected count is .32.

Pearson chi-square row is highly interested to predict the probability of statistical significance that occupation of father/male guardian is statistically significant at Bajiagaon, Kaliabor and Pachim Kaliabor block where X^2 value is 197.613 and $P=.000$ at $df=14$.

Table: 5.6(B) Cross Tabulation of Mother/Female Guardian Occupation

Mother/Female Guardian Occupation	Area	Bajiagaon	Kaliabor	Pachim Kaliabor	Total
	Household work	68	54	138	260
	Unorganized sector/Private sector	2	--	--	2
	Wage earner for day's work	3	--	--	3
	Farmer: Other land	4	2	--	6
	Employed in tea estate: Seasonal	65	--	15	80
	Employed in tea estate: Whole year	58	144	67	269

Pearson Chi-square Test

	Value	df	Asymp. Sig. (-2 Sided)
Pearson Chi-Square	195.610(a)	10	.000
Likelihood Ratio	202.563	10	.000
Linear-by-Linear Association	27.893	1	.000
No. of Valid Cases	620		

(a) 9 cells (50.0%) have expected count less than 5. The minimum expected count is .65.

In mother/female guardian occupation, it is found that Pearson chi-square is 195.610 at $df=10$ and $P=.000$, predicted that mother/female guardian occupation is statistically significant at different block. So, the strength of association of this variable is very strong at three different development blocks.

5.9: MONTHLY INCOME OF EACH SAMPLE HOUSEHOLD

Total sample household is 620 and each household monthly income is shown in the following tables. It is seen in field investigation that household monthly income is started from Rs.1000/- up to Rs 2820/-. It is observed in the field survey that most of the garden labour do not work whole day in a week. So, their monthly income is less. Monthly income of the tea tribe households are explained below:

Table: 5.7: Monthly Income of the Household

Sl. No.	Income	Bajiagaon HH	Kaliabor HH	Pachim Kaliabor HH	Total HH	Total Income
1	1000	4	0	0	4	4000
2	1050	2	0	0	2	2100
3	1100	9	0	0	9	9900
4	1150	3	0	0	3	3450
5	1200	13	0	0	13	15600
6	1300	28	0	1	29	37700
7	1350	8	0	0	8	10800
8	1390	9	0	0	9	12510
9	1400	15	0	0	15	21000
10	1450	7	0	0	7	10150
11	1500	6	1	0	7	10500
12	1550	3	5	1	9	13950
13	1600	24	9	10	43	68800
14	1650	2	1	4	7	11550

15	1700	19	3	8	30	51000
16	1750	1	0	1	2	3500
17	1790	1	0	4	5	8950
18	1800	11	0	7	18	32400
19	1850	1	0	0	1	1850
20	1900	11	2	4	17	32300
21	1990	1	0	0	1	1990
22	2000	4	3	1	8	16000
23	2050	1	2	4	7	14350
24	2080	0	0	1	1	2080
25	2090	0	0	5	5	10450
26	2100	3	6	20	29	60900
27	2150	1	0	5	6	12900
28	2160	0	0	1	1	2160
29	2180	0	0	2	2	4360
30	2190	0	0	4	4	8760
31	2200	4	36	20	60	132000
32	2250	1	3	10	14	31500
33	2260	0	0	3	3	6780
34	2270	0	0	1	1	2270
35	2280	0	1	4	5	11400
36	2290	0	0	2	2	4580
37	2300	3	55	18	76	174800
38	2350	0	7	3	10	23500
39	2390	0	4	4	8	19120
40	2400	1	20	20	41	98400
41	2450	1	4	9	14	34300
42	2480	0	0	4	4	9920
43	2490	0	0	2	2	4980
44	2500	3	11	6	20	50000
45	2550	0	4	1	5	12750
46	2600	0	10	8	18	46800
47	2650	0	2	6	8	21200
48	2700	0	8	5	13	35100
49	2750	0	2	2	4	11000
50	2800	0	1	8	9	25200
51	2820	0	0	1	1	2820
Total		200	200	220	620	1254380

Source: Field Investigation during 2016- 2017 ('HH' denotes Household)

The total monthly income of 620 household is Rs. 1254380/-. The average household

monthly income is Rs.2023.19/-. The total household member is 3007 out of 620 household and average household member is 4.9 (i.e. round off 5 members in each family shown in table: 5.2). So, monthly income of average household member is Rs. 404.63/-. In field survey, it is found that all the working members of tea tribe family do not like to work in all days in a week in the garden.

As per Tendulkar panel recommendation, poverty level income fixed at Rs. 27/- per day per person in rural area and Rs.33/- in urban area in 2011-12. So, poverty level of per capita monthly income in rural area is Rs.810/- (P. K. Dhar and Parijat Dhar, 2014).

With reference to the recommendations of Tendulkar panel, it is found in the study area that per capita monthly income of tea tribe household is less than Rs. 810/- (i.e. Rs. 404.63/- is the per capita income of tea tribe household).

On the basis of average monthly income (Rs.2023.19/-) of the 620 household, the income group is divided into two category as monthly income up to Rs.2000/- and monthly income above Rs.2000/- . It is shown in the following table: 5.7(A). In the field survey, it is seen that garden workers are not paid on daily basis. They are paid at almost end of the week. The daily income of tea tribe garden coolie is Rs. 90.50/- irrespective of all permanent and casual labour.

Table: 5.7(A) Monthly Income of Household

Income group	Development Block						Total	%
	Bajiagaon HH	%	Kaliabor HH	%	Pachim Kaliabor HH	%		
Up to 2000	182	91	24	12	41	18.6	247	39.84
Above 2000	18	9	176	88	179	81.4	373	60.16
Total	200	100	200	100	220	100	620	100

Source: Field Investigation during 2016- 2017

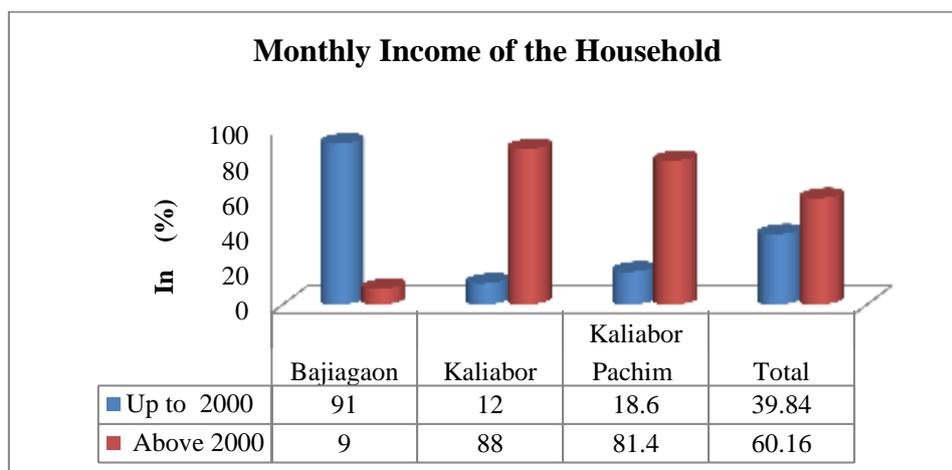


Figure: 5.3 Monthly Income of the Household

The table: 5.7(A) and figure: 5.3 reflects that Bajiagaon Block has 91% (i.e. highest percentage) of household having monthly income up to Rs. 2000/- and Kaliabor has only 12% household having monthly income up to Rs. 2000/-. The reason is wage earner and household worker of parent/guardian impact on household monthly income shown in table: 5.6.

Pearson Chi-square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	324.947 ^a	2	.000
Likelihood Ratio	355.448	2	.000
Linear-by-Linear Association	217.485	1	.000
No. of Valid Cases	620		

^a cells (.0%) have expected count less than 5. The minimum expected count is 79.68.

Pearson chi-square test states that monthly income of the household is statistically significant in Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block. It expressed that strength of association of this variable is very strong at different block where $P=.000$ at $X^2=324.947$. The income of the household is based on working member of the household (shown in table: 5.3).

5.10: TYPE OF DWELLING HOUSES

There are two types of dwelling houses found in the study area. They are: i) Pacca house, made of rode, cement, stone, wood and tin, supplied by tea management authority, and ii) Kachaa house, made of bamboo, wood, tin and have Kachaa floor. Some of Kachaa house is made of ikarra wall and thatch at their own cost.

Table: 5.8 Type of Dwelling House

House Pattern	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	(%)
Kachaa house	95	47.5	2	1.0	11	5.0	108	17.4
Pacca house	105	52.5	198	99.0	209	95.0	512	82.6
Total	200	100.0	200	100	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017

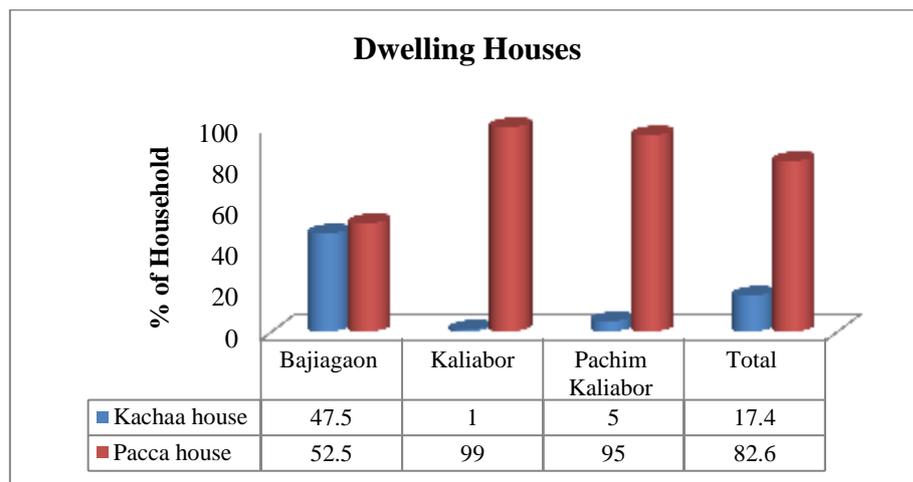


Figure: 5.4 Type of Dwelling House of Respondents in Study Area.

Table: 5.8 and figure: 5.4 explain that 108 (17.4%) households have no Pacca house and these are made by themselves at their own cost. The extension of family member builds the Kachaa house. The management authority does not provide them the separate quarter for family extension. So, they build the house at their own cost. It is made of bamboo, wood, ikara and tin. 82.6% household have Pacca houses supplied by tea management authority. It is seen that the quarters are made for nuclear family, not for joint family. The space of each quarter is insufficient to accommodate the joint family.

Table: 5.8(A) Cross Tabulation (Dwelling House)

House Pattern	Bajiagaon	Kaliabor	Pachim Kaliabor	Total
Kachaa	95	2	11	108
Pacca	105	198	209	512
Total	200	200	220	620

Source: Field Investigation during 2016- 2017

Pearson Chi-square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	186.876 ^a	2	.000
Likelihood Ratio	186.961	2	.000
Linear-by-Linear Association	126.667	1	.000
No. of Valid Cases	620		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 34.84.

In Pearson Chi-square Test, it is reflected that the probability of type of dwelling house is statistically significant at three different blocks, namely Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block. The coefficient of association of type of house of tea tribe is very strong at three different blocks, because $P=.000$.

5.11: RELIGION OF THE SURVEYED HOUSEHOLD

In the survey, it is found that, tea tribe people are belonging to two religions, namely: Hindu and Christian. In the investigation, it is also found that most of tea tribe community are basically Hindu and later on converted to Christian. The reason is that Christian Missionary enables to change their life style and tradition. Lallawmzuala, K. (2016) elaborated in his article that the tribal people of North- East India converted into Christian religion with the values of their traditional songs, dances, festivals, dresses and practices. However, the tribal people began to undertake the western religion and culture along with their traditional culture found in field survey.

Table: 5.9 Religion of Surveyed People

Religion	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Hindu	73	36.5	116	58.0	95	43.2	284	45.8
Christian	127	63.5	84	42.0	125	56.8	336	54.2
Total	200	100.0	200	100	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017

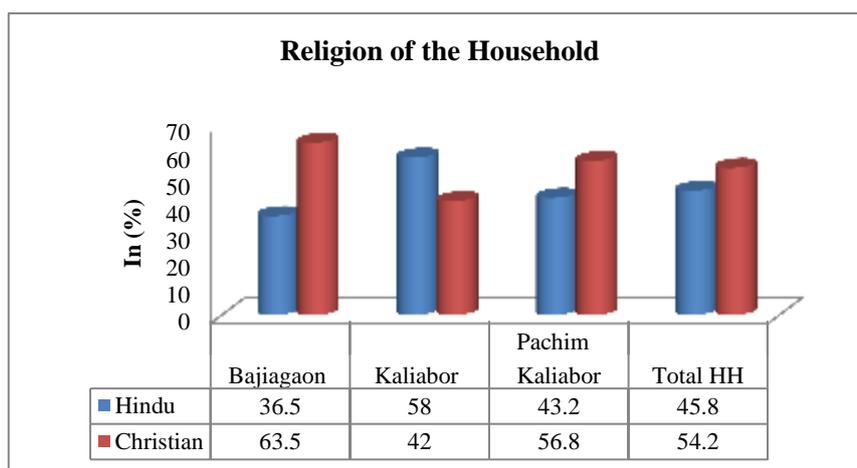


Figure: 5.5 Religion of Respondents

The table: 5.9 and figure: 5.5 states that the respondents belonging to Hindu Religion are 45.8%. The highest 58% of respondent of Kaliabor Block are belonging to Hindu Religion. Hindu Religion is lowest (36.5%) in Bajiagaon Block.

5.12: EDUCATION OF PARENT/GUARDIAN

Education of parent/guardian refers to the literacy level of parent/guardian of children. Parent/guardian is the head of the family of surveyed tea tribe community. The development of child, formation of human capital is based on literacy rate of their parent/guardian. It shows the formal education of parent/guardian in gender wise.

Table: 5.10 explain literacy and illiteracy rate of parent/ guardian of the children. Parent/guardian states father/male guardian and mother/female guardian which have the impact on child development. Illiteracy percentage of father/male guardian is 43.5% while mother/female guardian is 52.3%. The reason is there is gender discrimination in

taking education in tea tribe community. People believed that the female child is fit for doing household work.

Table: 5.10 Education of Parent/Guardian

Parents'/Guardians' Education Level		Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
		Count	%	Count	%	Count	%	Count	%
Father/Male Guardian	Illiterate	106	53.0	75	37.5	89	40.5	270	43.5
	Can read and write	64	32.0	61	30.5	91	41.4	216	34.8
	Primary school education	28	14.0	60	30.0	39	17.7	127	20.5
	ME school education	2	1.0	4	2.0	1	.5	7	1.1
	Total	200	100.0	200	100.0	220	100.0	620	100.0
Mother/Female Guardian	Illiterate	139	69.5	90	45.0	95	43.2	324	52.3
	Can read and write	47	23.5	82	41.0	107	48.6	236	38.1
	Primary school education	11	5.5	28	14.0	18	8.2	57	9.2
	ME school English education	3	1.5	-	-	-	-	3	.5
	Total	200	100.0	200	100.0	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017 ('ME' denotes Middle English).

The above table: 5.10 is divided into two parts as father/male guardian education and mother/female guardian education in order to show the statistical significance at different development block in the study area.

Table: 5.10 (A) Father/Male Guardian Education

Parent/Guardian Education Level		Bajiagaon	Kaliabor	Pachim Kaliabor	Total
Father/Male Guardian	Illiterate	106	75	89	270
	Can read and write	64	61	91	216
	Primary school education	28	60	39	127
	ME school education	2	4	1	7
	Total	200	200	220	620

Father/Male Guardian Education: Pearson Chi-Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.521(a)	6	.000
Likelihood Ratio	25.703	6	.000
Linear-by-Linear Association	3.372	1	.066
No. of Valid Cases	620		

(a) 3 cells (25.0%) have expected count less than 5. The minimum expected count is 2.26.

Pearson Chi-square test reflect that education of father/male guardian of children are statistically significant at Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block because chi-square value is 26.521 at df= 6 and P=.000.

Table: 5.10(B) Cross Table of Mother/Female Guardian Education

Parents'/Guardians' Education Level		Bajiagaon	Kaliabor	Pachim Kaliabor	Total
Mother/Female Guardian	Illiterate	139	90	95	324
	Can read and write	47	82	107	236
	Primary school education	11	28	18	57
	ME school education	3	0	0	3
	Total	200	200	220	620

Mother/Female Education: Pearson Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.458 ^a	6	.000
Likelihood Ratio	50.242	6	.000
Linear-by-Linear Association	14.877	1	.000
No. of Valid Cases	620		

^a 3 cells (25.0%) have expected count less than 5. The minimum expected count is .97.

Table: 5.10(B) is the cross table drawn from table: 5.10 for analyzing Pearson Chi-square Test. Pearson chi-square test on education of mother/female guardian reveals that this variable is statistically significant at different block namely, Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block because, $X^2=49.458$ at df=6 and P=.000.

The above Pearson chi-square test of education of parent/guardian of child labour statistically predicted that education of head of the surveyed family is statistically significant at different block where $P=.000$.

5.13: EDUCATION OF CHILD LABOUR

Formal school education of children starts from 6 years (i.e. admission in class I) and ended in 14 years old (i.e. in class VIII). Age reference of children education is taken from Indian Constitution Article: 21(A) and 51(A)(K). Sarva Siksha Aviyam of India (2010) also considered the age of elementary school education and ME school education in between 6-14 years from class I to class VIII as free and compulsory education as per constitution of India. Moreover, fundamental rights, mentioned in Article 21(A) explained the free and compulsory education in between the age of 6-14 years old. So, the study considered children age in between 6-14 years.

Table: 5.11 Last Education of Child Labour

Education	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	%
Not attended school	2	0.9	2	1.5	4	2.6	8	1.6
I	4	1.8	2	1.5	0	0	6	1.2
II	4	1.8	0	0	1	.7	5	1
III	1	0.4	0	0	0	0	1	0.2
IV	19	8.8	6	4.6	2	1.3	27	5.4
V	10	4.6	7	5.4	0	0	17	3.4
VI	68	31.6	45	35.1	48	31.8	161	32.5
VII	101	46.9	65	50.7	95	62.9	261	52.8
VIII	6	2.7	1	0.7	1	.7	8	1.6
Total	215	99.5	128	99.5	151	100.0	494	99.7

Source: Field Investigation during 2016- 2017

The table: 5.11 explained the last attended class of education of child labour. The total child labour (8 numbers) is not attended in the school as per the report of head of the surveyed family during field survey. The highest number of child labour (261) found in the class (VII). 161 numbers of child labours are found in class (VI). Although dropped out children in class VII is found high percentage (52.8%), yet it is seen in field survey that tea tribe community school attended children are mostly irregularly regular. In class

(VII), the age of children is around 12 years old. The reasons of dropped out school are related to poverty, parental loss, parental separation, social disorder to attend school, indebtedness of parents and ignorance of parents about child potentiality (table:5.15).

In school attendance, it is seen in the field study that 60% of children liked to leave the school education. The fundamental reason is that the parent of the children failed to afford some indirect cost related to study like cost on khata, pen-pencil and detergent for cleaning the dress. As such destitute children leave out school life and engaged in economic activities. Girls often stayed at home to look after their siblings when adults are in working field.

Moreover, it is observed from field investigation that most of the parents of children are the labour from childhood and it impacts on their children also. Working from childhood becomes the social tradition among tea tribe community. They do not like to understand the return on education. So, they do not hesitate to employ their child at an early day. The children of tea tribe are very much interested to work in the garden as inspired by their parent/guardian. They also believed the proverb 'learning by doing'. Motivation measure on education is indeed necessary in this area in order to motivate parent/guardian and children from the field of child labour.

5.14: ELECTRICITY FCILITY, PURE DRINKING FACILITY AND SANITARY FACILITY

The requirements to maintain normal life of tea tribe household are electricity supply, pure drinking water facility and pacca sanitary facility in tea estate coolie line (i.e. tea tribe). Tea tribe inhabitant line in tea estate is treated as coolie line.

Field survey data towards electricity facility, pure drinking water and sanitary facility are given in table: 5.12.

Table: 5.12 Facilities Available in the Surveyed Household

Facilities		Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
		Count	%	Count	%	Count	%	Count	%
Electricity Facility	Yes	193	96.5	198	99.0	211	95.9	602	97.1
	No	7	3.5	2	1.0	9	4.1	18	2.9
	Total	200	100.0	200	100.0	220	100.0	620	100.0
Pure Drinking Water	Yes	48	24.0	173	86.5	202	91.8	423	68.2
	No	152	76.0	27	13.5	18	8.2	197	31.8
	Total	200	100.0	200	100.0	220	100.0	620	100.0
Pacca Sanitary facility	Yes	23	11.5	13	6.5	11	5.0	47	7.6
	No	177	88.5	187	93.5	209	95.0	573	92.4
	Total	200	100.0	200	100.0	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017

In table: 5.12, it is reflected that 97.1% sample household have got electricity facility to entertain. Pure drinking water is available for 68.2% sample household. In the field survey, it is observed that one Pacca well is provided in the street of coolie line for about 6-8 households. They do not have own pure drinking water facility at their own campus. 68.2% tea tribe households used filter for pure drinking water and 31.8% households do not have pure drinking facility.

Likewise, in the data collection related to sanitary facility in surveyed household, it is found that 94.2% have beyond usable Pacca sanitary facility. At initial stage of quarter allotment, they have the Pacca sanitary facility provided by tea management authority, but due to lack of proper renovation, 94.2% household do not have usable quality of Pacca sanitary.

Pearson Chi-square Test

Chi-square test is required to reflect the significance of various variables of electricity, pure drinking water and sanitary facility at different block level. It is seen one by one in the following:

Table: 5.12(A) Electricity Facility (Cross Tabulation)

Count		Block			Total
		Bajiagaon	Kaliabor	Pachim Kaliabor	
Electricity	Yes	193	198	211	602
	No	7	2	9	18
Total		200	200	220	620

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.924 ^a	2	.141
Likelihood Ratio	4.640	2	.098
Linear-by-Linear Association	.170	1	.680
No. of Valid Cases	620		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.81.

The above chi-square test of electricity facility proved that, electricity supply has no statistical significance at three different blocks, because Pearson chi-square value is 3.934 where strength of association is very weak at $df=2$ and so, $P>1$. The reason is that 97.1% surveyed household got electricity facility but 2.9% do not have electricity facility (table: 5.12). Negative respondent of the variable is nominal and so it is statistically insignificant in block level.

Table: 5.12(B) Pure drinking water (Cross tabulation)

Count		Block			Total
		Bajiagaon	Kaliabor	Pachim Kaliabor	
Pure drinking water	Yes	48	173	202	423
	No	152	27	18	197
Total		200	200	220	620

Pearson Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	267.746(a)	2	.000
Likelihood Ratio	271.846	2	.000
Linear-by-Linear Association	216.346	1	.000
No. of Valid Cases	620		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 63.55.

Table: 5.12(B) is the cross tabulation of pure drinking water of tea tribe household and significance of this variable at different block is focused with the help of Pearson Chi-square test. In Chi-square test of pure drinking water, it is seen that in coolie line, pure drinking water facility is statistically significant for sample household at different block where probability value is 0.000 and chi-square is 167.746. It means the strength of association of this variable at different block level is strong.

Table: 5.12(C) Pacca Sanitary Facility (Cross Tabulation)

Count		Block			Total
		Bajiagaon	Kaliabor	Pachim Kaliabor	
Pacca Sanitary facility	Yes	23	13	11	47
	No	177	187	209	573
Total		200	200	220	620

Pearson Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.810 ^a	2	.033
Likelihood Ratio	6.536	2	.038
Linear-by-Linear Association	6.208	1	.013
No. of Valid Cases	620		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.16.

Table: 5.12(C) explains the significance of pacca sanitary facility at block level with the help of Pearson Chi-square test. The Pearson chi-square test focused that pacca sanitary facility is statistically significant at different block because X^2 value is 6.810 at $df=2$ where $P<1$. The reason is existing Pacca sanitary are not renovated for long years and now being unusable.

5.15: ROAD AND COMMUNICATION FACILITY IN COOLIE LINE

Road and communication facility is one of the important variables to reflect the child development in the study area. In the observation of field survey, it is seen that road and communication system is very bad in coolie line. It is difficult to run vehicles on

this road due to disorderly ups and downs. In the rainy season, even Motor cycle is not possible to ride in coolie line. The field surveyed data are given in table: 5.13.

Table: 5.13 Road and Communication Facility in Coolie Line

Transport & Communication Facility	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	2	1.0	--	--	7	3.2	9	1.5
No	198	99.0	200	100.0	213	96.8	611	98.5
Total	200	100.0	200	100.0	220	100.0	620	100.0

Source: Field Investigation during 2016- 2017

Chi-square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.835 ^a	2	.020
Likelihood Ratio	9.610	2	.008
Linear-by-Linear Association	3.691 ^b	1	.055
No. of Valid Cases	620		

^a 0 cells (.0%) have expected count less than 5 and ^b the standardized statistic is -1.921.

The above table: 5.13 state that 98.5% households have no road and communication facility. Pearson chi-square row predicted that road and communication at different block is significant where $P < 0.05$ and chi-square value is 7.835 at $df=2$. The reason is tea management authority does not give importance on the development of road and communication in coolie line.

5.16: OCCUPATIONAL AREA OF CHILD LABOUR

It reflects the occupation area of Children in between the age group of 6-14 years. Occupied children are treated as child labour. Data are collected from the field and represented in table: 5.14.

Table: 5.14 Occupational Area of Children

Occupation	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	%
Small Tea Garden	69	32.1	40	31.3	40	26.5	149	30.2
Domestic work as slavery	53	24.7	38	29.7	36	23.8	127	25.7
Work in Private/Unorganized sector (Agricultural Field, Garage, Shop)	16	7.4	2	1.6	1	.7	19	3.8
Quarry (Home based)	42	19.5	12	9.4	8	5.3	62	12.6
Hotel	3	1.4	--	--	--	--	3	.6
Brick kiln	1	.5	--	--	--	--	1	.2
Street Business	3	1.4	3	2.3	5	3.3	11	2.2
Factory	--	--	1	.8	2	1.3	3	.6
Dairy/cattle/poultry farm	21	9.8	14	10.9	11	7.3	46	9.3
Work in other sector	7	3.3	18	14.1	48	31.8	73	14.8
Total	215	100.0	128	100.0	151	100.0	494	100.0

Source: Field Investigation during 2016- 2017

In table: 5.14, the child labour found highest in small tea garden. The reason is small tea garden is growing near by the tea estates and tea tribe children are used for tea plantation work. Moreover, child labour in the age group 6-14 is energetic and can do without any fatigue. They do not have any association to do agitation. Child labour from tea estate is found least in Brick kiln factory i.e. 0.2% only. The reason is that they are not interested to work in Brick Kiln factory. Child labour in factory like biscuit factory and cement factory are nominal.

Work in other sector includes driving of tractor used in agricultural field, child care services, home based products, care of fish plantation, mason work, sale of chicken broiler meat and other agricultural work at the time of harvesting are 3.3%, 14.1% and 31.8% in Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block respectively. The total child labour found in other sector is 73 and the percentage is 14.8%.

5.17: REASONS OF CHILD LABOUR

The important reasons of child labour are related to poverty lies in low income earnings of family member due to irregularly regular occupation treated as wage earner (shown in table: 5.6), parental loss of children, large size family member, ignorance of parents on child potentiality due to high illiteracy rate, social disorder to attend school, abuse from family member due to violation of doing economic activities and indebtedness of parents. Data collected from field survey are represented by table: 5.15. It is noted here that each child labour have multiple reasons for doing economic activities obtained in field investigation.

Table: 5.15 Reasons of Child Labour in the Study Area

Reasons of Child Labour	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	%
Poverty	137	63.7	80	62.5	108	71.5	325	65.8
Parental loss	38	17.7	10	7.8	14	9.3	62	12.6
Large size family member	21	9.8	7	5.5	6	4.0	34	6.9
Ignorance of parent on child potentiality	25	11.6	14	10.9	2	1.3	41	8.3
Social disorder to attend school	68	31.6	8	6.3	6	4.0	82	16.6
Abuse from family member	4	1.9	1	0.8	2	1.3	7	1.4
Working for indebtedness of their parents	0	0.0	21	16.4	21	13.9	42	8.5

Source: Field Investigation during 2016- 2017

Pearson Chi-square Test

The following table: 5.15(A) is used for Pearson chi-square test. This following table shows that most of the child labour has multiple reasons for doing economic activities in childhood. The total child labour 494 assigned multiple reasons in questionnaire.

Table: 5.15(A) Cross Tabulation of Reasons of Child Labour & Chi-square Test

Reason	Bajiagaon	Kaliabor	Pachim Kaliabor	Total	Pearson Chi-square Test
Poverty	137	80	108	325	$X^2=103.57$ $df=12$ $P=0.000$
Parental loss	38	10	14	62	
Large size family member	21	7	6	34	
Ignorance of parent	25	14	2	41	
Social disorder	68	8	6	82	
Abuse from family member	4	1	2	7	

Working for indebtedness of their parents	0	21	21	42	
---	---	----	----	----	--

Source: Field Investigation during 2016- 2017

The above table: 5.15 explain that poverty is the fundamental cause of child labour. Poverty reflects low income earnings of the household. Irregular working of household member (i.e. wage earner) and household working occupation are the determinants of poverty (shown in table: 5.6). The highest number of respondent of child labour is 325, getting as because of poverty. Social disorder is 2nd highest cause of child labour getting 82 child labour respondent. Social disorder in the area specifies that illiterate parents have no importance to send their child to school; the normal situation is spoiled by drinking wine almost every night. 62 number of child labour respondents are because of parental loss. Total child labour 494 has multiple reasons that employ the child in various economic activities.

Pearson chi-square test reflects that observed distribution reasons of child labour are statistically significant at Bajiagaon block, Kaliabor block and Pachim Kaliabor block because, $X^2=103.57$ at $df=12$ and $P=.000$.

5.18: HEALTH STATUS OF CHILD LABOUR

Health status of some of child labour is found disorder in the field investigation. They are suffering from various diseases due to engage in hazardous work. Lack of nutrition and consciousness to health are the prime cause of health disorder.

Table: 5.16 Health Status of Child Labour

Health Disorder	Bajiagaon		Kaliabor		Pachim Kaliabor		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	135	62.8	75	73.4	73	48.3	283	57.3
No	80	37.2	53	26.6	78	51.7	211	42.7
Total	215	100.0	128	100.0	151	100.0	494	100.0

Source: Field Investigation during 2016- 2017

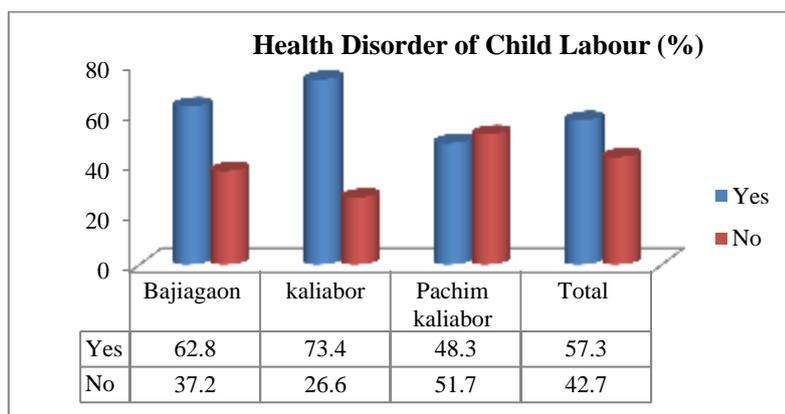


Figure: 5.6 Health Disorder of Child Labour

Table: 5.16 and figure: 5.6 state the health disorder of child labour due to lack of nutrition food and hygienic working conditions. Parent/guardians are unconscious about health care, found in field investigation. 57.3% child labour is suffering from health disorder.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.686 ^a	2	.021
Likelihood Ratio	7.662	2	.022
Linear-by-Linear Association	7.319	1	.007
No. of Valid Cases	494		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 54.67.

Pearson chi-square test predicted that health disorder is statistically significant at different block. The probability value of health disorder is less than 1 and $X^2=7.686$ at $df=2$. The reason is that child labour and their parent/guardian don't have much knowledge on health care. In the field observation, it is found that many of them are sleeping without mosquito net and also they do not have to take nutritious food after doing hard work. In the field survey, it is found that almost all the tea estates have each dispensary maintained by tea management authority. However, existing dispensaries have under staffed and limited equipped with inadequate medicines due to which the patients have rushed in nearby primary health centres or to the civil hospital.

Table: 5:17 Average of Child Labour

Average	Bajiagaon	Kaliabor	Pachim Kaliabor	Total
	Mean	Mean	Mean	Mean
Age in years	12.1	12.3	12.6	12.3
Last Education (in class)	6.0	6.2	6.4	6.2

Source: Field Investigation during 2016- 2017

The above table: 5.17 explain the average of child labour with respect to age, education. The average age of child labour is 12+, because it is the age of children in which employers are interested to employ for their energetic, tireless, smooth finishing work without labour union. The average last education of child labour is class VI+.

In a nutshell, it is found that Pearson chi-square test predicted that the variables like distribution of respondent, size of family, occupation of parent/guardian of children, monthly income of the household, type of dwelling house, education of parent/guardian, pure drinking water facility, sanitary facility, road and communication facility, reasons of child labour, health status of child labour are significant at Bajiagaon Block, Kaliabor Block and Pachim Kaliabor Block under Kaliabor sub-division of Nagaon district, Assam.

5.19: BINOMIAL LOGISTIC REGRESSION ANALYSIS

A binomial logistic regression analysis popularly otherwise known as bivariate logistic regression analysis predicts the probabilities that an observation lies on one of the two categories of a dichotomous dependent variable based on one or more independent variables which is categorical explained by ‘Classification Table’ (Field, A., 2005). The study follows binomial logistic regression analysis (through SPSS- 16.0 version) in order to predict the probability that the observation lies on dichotomous dependent variable (i.e. ‘No child labour’ and ‘Have child labour’) based on more than one predictors (i.e. independent variables like age, gender, religion, income, occupation, size of family member, type of housing, electricity facility, pure drinking facility, pacca sanitary facility and road and communication) explained by classification table:

5.19(D).

Basic specification, mentioned in methodology, of binomial logistic regression is:

$$P(Y) = \frac{e^{b_0 + b_1 x_1 + b_2 x_2 + \dots + b_n x_n}}{1 + e^{b_0 + b_1 x_1 + b_2 x_2 + \dots + b_n x_n}}$$

Where,

- Y is Dependent Variable,
- P is the Probability of Y occurring,
- e is Natural logarithm base ,
- b_0 states Interception at Y axis,
- $b_1 x_1 \dots b_n x_n$ are the regression coefficient of independent variables,

‘ X ’ is the predictor of ‘ Y ’ variable.

Sample data 620 are collected from head of household of Tea Tribe as respondent for predicting statistical significance on dichotomous dependent variable through binomial logistic regression analysis. Data are loaded in SPSS- 16.0 version.

Table: 5.18 Case Processing Summary

Unweight Cases ^a		N	Percent
Selected Cases	Included in Analysis	620	100.0
	Missing Cases	0	.0
	Total	620	100.0
Unselected Cases		0	.0
Total		620	100.0

^a if weight is in effect, see classification table for the total number of cases

In table: 5.18 Case processing summary, ‘N’ is the number of cases in each category, ‘Percentage’ is the percent of cases in each category, ‘Included in Analysis’ states the number (i.e. 620) and percentage of cases which are included in the analysis having no missing data is 100%, ‘Missing cases’ is zero, Total is the sum of the cases that included in the analysis (i.e. 620+0=620).

Table: 5.19 Dependent Variable Encoding

Original Value	Internal Value
No child labour	0
Have child labour	1

In table: 5.19, dependent variable is coded as no child labour in the household of the survey coded '0' and have child labour in the household of the survey coded '1'. Binomial logistic regression focuses the probability of the occurrence of an event. If the value of probability of the occurrence is more than or equal to 0.05 or 1, SPSS statistics classifies the event as occurring. If the value of probability of the occurrence is less than .05 or 1, the classified event treated as not occurring. Prediction of the cases under binomial logistic regression is based on proper classification of the event. It is commonly used by 'Classification Table' [table: 5.19 (A)] given below:

Table: 5.20 Classification Table^a

	Observed		Predicted		
			Have Child labour		Percentage Correct
			No child labour	Have child labour	
Step 1	Child labour have	No child labour	99	66	60.0
		Have child labour	37	418	91.9
	Overall Percentage				83.4

^a the cut value is .500

In table: 5.20, cut value of classification table is .500 stated by subscript 'a'. It represents that since, the probability of a case being classified as 'Have child labour' is greater than .500 and more than no child labour therefore, the particular case is classified into 'Have child labour' category. Otherwise, the probability case being classified is against 'Have child labour'. The percentage accuracy in classification focuses the percentage of cases which is correctly classified as 'Have child labour' in the household with the independent variables.

Table: 5.21 Model Summary

Step	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²
1	407.220 ^a	.395	.575

'a' Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Above 'Model summary' table: 5.21, 'step 1' is the full model with predictors, explain the variation in the dependent variable by considering the model '-2 Log likelihood' and 'R²'. Cox & Snell R² and Nagelkerke R² are two model used to show the variance. Now, the variance in the dependent variable based on ranges from 39% to 57% depending on Cox & Snell R² and Nagelkarke R² methods respectively. Modification of Cox & Snell R² is Nagelkerke R² where the value of Cox & Snell R² cannot achieve the value more than 1(i.e. .395<1).

5.19 (a): BINOMIAL TABLE OF THE INDEPENDENT VARIABLES

The following binomial table state the independent variables (socio-economic Variable) related to household necessary to predict the significance on dependent variable 'have child labour' with the help of binomial logistic regression model.

Independent variables (i.e. Socio-economic variables) known as predictors used in binomial table are: gender, religion, age, monthly income of household, occupation, education, size of household, electricity facility, pure drinking facility, pacca sanitary facility, road and communication of the respondents are given below:

Table: 5.22 Binomial Independent variables (Predictors)

Variables		Count	%
Gender	Male (0)	482	77.7
	Female (1)	138	22.3
Religion	Hindu (0)	284	45.8
	Christian (1)	336	54.5
Age (Mean age is 38.11)	Up to 38 (0)	370	59.7
	Above 38 (1)	250	40.3
Monthly Income of the Household (Mean Income: Rs. 2023.19/-)	≤Rs.2000/- (0)	247	39.84
	>Rs.2000/- (1)	373	60.16
Father/Male Guardian Occupation	Wage earner (0)	130	21.0
	Other than wage earner (1)	490	79.0
Mother/Female Guardian Occupation	Household work (0)	260	41.9
	Other than HH work (1)	360	58.1
Father/Male Guardian Education	Illiterate (0)	270	43.5

	Literate	(1)	350	56.5
Mother/Female Guardian Education	Illiterate	(0)	324	52.3
	Literate	(1)	296	47.7
Size of household (From mean size)	1 to 4	(0)	225	36.3
	Above 4	(1)	395	63.7
Type of House	Kachaa House	(0)	108	17.4
	Pacca House	(1)	512	82.6
Electricity Facility	No	(0)	18	3.0
	Yes	(1)	602	97.0
Pure Drinking Water	No	(0)	197	31.8
	Yes	(1)	423	68.2
Pacca Sanitary Facility	No	(0)	573	92.4
	Yes	(1)	47	7.6
Road & Communication Facility	No	(0)	611	98.5
	Yes	(1)	9	1.5

Source: Field Investigation during 2016- 2017

The above table: 5.22 states that male respondent is more (77.7%) than female respondent (22.3%). The reason is during investigation it is found that if father/male guardians are present, then female do not come out as respondent.

In respect of religion, Hindu is 45.8% and Christian is 54.2%. In the survey period, it is expressed that most of the Christian religions are converted from Hindu religion and they accept the western culture along with their own traditional culture.

Age of respondent in binomial distribution is obtained from mean age 38.11. As such age is considered up to 38 and above 38 years of respondent. 59.7% respondent is found up to age 38 years. The reason is that in this age group, the household have the highest numbers of children (6-14 years). Above 38 years of respondent, the numbers of children are less. In this age of respondent, above children member means adulthood is found more.

In the study of monthly income of the household, it is seen that up to Rs. 2000/- , the household income earner is 39.84%. The reason is that they do not like to work regularly. Some of the household members are working less than 5 days in a week.

In occupation of father/male guardian, it is seen that 21% are the wage earners who do not have permanent occupation in the tea estate and do not work all the days in a week.

The wage earners work outside the tea estate and as such working irregularly. They do not support their family income. In mother/female guardian occupation, it is seen that 41.9% are engaged in household work from which they do not earn money. They are at home to support infant, elderly infirm people. The mother/female guardians who have the occupation are 58.1%. Most of them are working in tea estate.

In the size of family, it is found that mean size of family member is up to 4 members and above 4 members. 63.4% household have above 4 members. Up to 4 members in each household means small size households have least children but have infants. So, respondent is less in small family size. Highest number of children are found in the family size more than 4 members. They have the children in the age group of 6-14 years.

Education of household is another important socio-economic factor influence on child labour. Literacy rate of father/male guardian is 56.5% and mother/female guardian is 47.7%. The illiteracy rate of father/male guardian and mother/female guardian is 43.5% and 52.5% respectively. The reason is that during childhood periods of tea tribe people there was no importance of education in their society and also have inadequate numbers of schools. Their forefathers were ignorant about the potentiality of child. They believed 'Learning by Doing'. It is generation wise activities and tradition.

Tea tribe people are living in two types of houses in the tea estate. One of them is Pacca house, supplied by tea management authority and other is Kachaa house build by tea tribe itself. Pacca houses are said as quarters. 82.6% respondents are living in Pacca house and 17.4% are living in Kachaa house.

In the analysis of electricity facility, it is found that electricity is entertained by 97% household. Pure drinking water facility is used by 68.2% household (i.e. they used filter at home). Tea management authority supplied pure drinking water outside the premises of quarters (i.e. one Pacca well for 8-9 quarters). Only 7.6% household used Pacca sanitary because Pacca sanitary of quarters are unusable due to lack of renovation. So,

household used temporary unhygienic sanitary. However, Tea management authority has provided sanitary facility at the time of allotment of quarter.

Another important socio-economic factor is road and communication which is found worst in coolie line. 98.5% household do not get road and communication facility in coolie line. The reason is tea management authority do not give importance on the development of road and communication in coolie line to communicate with main black tapping road.

The significance of Independent Variables (i.e. socio-economic factors) on dependent variable (i.e. Have child labour) is explained by Logistic Regression Model in table: 5.23.

Table: 5.23 Binomial Logistic Regression (Variables in the Equation)

Predictors		B	SE	Wald	df	Sig.	Exp.(B)	95% CI for Exp.(B)	
								Lower	Upper
Step 1 ^a	Gender of Respondent	.105	.664	.025	1	.874	1.111	.302	4.083
	Age of Respondent	-.483	.273	3.131	1	.077	.617	.361	1.053
	Father/Male Guardian Education	1.026	.391	6.879	1	.009	2.791	1.296	6.009
	Mother/Female Guardian Education	-1.626	.331	24.132	1	.000	.197	.103	.376
	Father/Male Guardian Occupation	-2.024	.782	6.707	1	.010	.132	.029	.611
	Mother/Female Guardian Occupation	-2.581	.335	59.309	1	.000	.076	.039	.146
	Size of Household Regression	1.642	.359	20.904	1	.000	5.166	2.555	10.443
	Monthly Income of Household	-2.715	.450	36.328	1	.000	.066	.027	.160
	Religion	-.658	.271	5.898	1	.015	.518	.305	.881
	Type of Dwelling Houses	.544	.681	.639	1	.424	1.723	.454	6.538
	Electricity	-.461	1.177	.154	1	.695	.631	.063	6.327
	Pure Drinking Water	-1.029	.457	5.084	1	.024	.357	.146	.874
	Pacca Sanitary	-2.254	.534	17.813	1	.000	.105	.037	.299
	Road & Communication	1.060	1.044	1.030	1	.310	2.886	.373	22.346
	Constant	7.710	1.493	26.655	1	.000	2230.998		

^a variables entered on step 1: Gender, Age of respondent, Father/male guardian education, Mother/female guardian education, Father/male guardian occupation, Mother/female guardian occupation, Size of Household regression, Monthly household income, Religion, Type of dwelling houses, Electricity facility, Pure drinking water and Sanitary facility, Road and Communication.

The above 'Variables in Equation Table' (table: 5.23) focuses the contribution of each independent variable to the model. Wald Test column reflects the statistical significance of each independent variable. Statistical significance is expressed in 'Sig' column. It is found that some of the predictors (i.e. socio-economic factors) like proportion of gender, age of the respondent, dwelling house type, electricity, road and communication have no significant statistically on dependent variable. Such variables have remarkably proportionate difference and found not statistically significant role on dependent variable (i.e. Have child labour) due to $P > 0.05$.

Some of the other independent variables (i.e. socio-economic factors), on the other hand, are responsible to predict the dependent variable (have child labour) in the household created in the binary method as 0 and 1. Out of 14 independent variables of household having child labour, 9 variables like father/male guardian education and mother/female guardian education, father/male guardian occupation and mother/female guardian occupation, size of household, monthly income of the household, religion, pure drinking water facility, Pacca sanitary facility in the household are significant on the occurrence of child labour in the tea tribe household.

Father/male guardian education, $B=1.026$ reflected illiteracy of predictor do not have statistical significant. The $\text{Exp.}(B)=2.791$ and odd ratio compares the likelihood of literate in comparison to illiterate father/male guardian is $(1/2.791)=.358$ times. Literate father/male guardian failed to prevent child labour. They do not give any importance for child development. It is because of social disorder. It is observed in the study area that most of the household member drinking local vodka after day's work.

Likewise, in predictor coefficient $B= -1.626$ represent that illiteracy of mother/female guardian is statically significant (i.e. $P=0.000$) on 'have child labour' in the household. The $\text{Exp.}(B)= .197$ and odd ratio compares the likelihood of illiterate to literate mother/female guardian is: $1/.197=5.07$ times. It is found in field survey that children are very close to mother/female guardian and can solve their all possible problems. So, mother has greater influence on child development in a family than father/male

guardian.

The economic factor occupation of father/male guardian, B value is -2.024 focused that father/male guardian engaged in wage earner determines the probability to have child labour in the household since, the $P < 1$. The odd ratio of father/male guardian occupation and Exp. (B) = .132 compares the likelihood of engage in wage earner determines 'have child labour' in comparison to other than wage earner is: $1/.132 = 7.57$ times. The reason is that wage earners have no definite income and so, less contribution to support family income.

With the occupation of mother/female guardian, the B is -2.581 reflect that mother/female guardian engaged in household work determines 'have child labour' in the household. The odd ratio of occupation of mother/female guardian and Exp. (B) = .076 compares the likelihood of engage in household work to other than household work is $1/.076 = 13.16$ times. The reason is that they do not have monetary income to support their family in doing household work. It is observed that mother/female guardian look after their infants, old age people and maternity period live in house. It leads to withdrawal of children from school. The mother who devote more time for occupation, get much opportunity to allocate their child towards school education and hence, they have less child labour.

The predictor size of household member, the B value is 1.642 expressed the statistical significance of size of more than 4 members of the household on dependent variable 'have child labour' in the household where $P = 0.000$. The odd ratio of size of household members and Exp.(B) = 5.166 compares the likelihood of $4 <$ members over up to 4 members in a household is: $1/5.166 = .194$ times. It means higher the family size; the higher is the possibility to have child labour. Field survey reflects that high numbers of family member generates the child labour due to less household monthly income. Head of the family failed to manage the large family member properly with meager income and as such have the child labour.

In predictor monthly income of sample household, the B value is -2.715 focused that up

to Rs. 2000/- monthly income of the household is statistically significant to 'have child labour' in the household where $P=.000$. The odd ratio of monthly income of the sample household and $\text{Exp.}(B)=.066$ compares the likelihood up to Rs. 2000/- monthly income determines have child labour to more than Rs. 2000/- monthly income of the household is: $1/.066=15.15$ times. It means lower the income of the family, higher the child labour. In the survey, it is found that tea tribe workers have low monthly income due to irregular work of household member and in consequence they have less income.

In socio-economic factor religion of sample household, B value is $-.658$ reflect the statistical significance of Hindu religion to have child labour in a household where $P<0.05$. The odd ratio and $\text{Exp.}(B) = .518$ compares the likelihood of Hindu religion over Christian is: $1/.518= 1.93$ times. In the field survey, it is seen that most of Hindu people converted into Christian religion and then follow Western culture along with their traditional culture. Such conversion changes the attitude of household on child development.

B value is -1.029 in pure drinking water of sample household reflected 'no pure drinking water' in household is statistically significant on the probability to 'have child labour' in the household where $P<0.05$. The odd ratio and $\text{Exp.}(B) = .357$ compares the likelihood of no pure drinking water in household over to have pure drinking water is in: $1/.357= 2.80$ times. The reason is tea management authority supply the drinking water in the street. The households used filter for drinking water at home at their own cost.

In Pacca sanitary facility of sample household, B value = -2.254 focused that 'no pacca sanitary facility' has the statistical significance on 'have child labour' where $P=.000$. The $\text{Exp.}(B)= .105$ and odd ratio compares the likelihood of no pacca sanitary facility over to have sanitary facility is $1/.105= 9.52$ times. The fact of no Pacca sanitary facility is that tea management authority provided this facility to the quarter but have no renovation for long time and for most of them, it is unusable. So, 92.4% of them have no Pacca sanitary facility (table: 5.22).

5.20: CONCLUSION

It is undoubtedly said that child labour is a socio-economic crime adversely impact on human capital formation. The child is compelled to invest his childhood to earn bread for himself and family, depriving from playground, school and health care. Due to the absence of trade union among child labour, the employers take the opportunity to exploit them by paying least wages. As such they are become lowest paid ceaseless worker. International Labour Organisation states that born to parents who themselves were uneducated at their childhood worker forced to continue as child labour from generation to generation that chained to a life of poverty (ILO, United States Policies to Address Child Labour Globally, 2010).

The study also observed that tea tribes, basically garden labour, live in backward area. Illiteracy, poverty, addiction to country beer, indebtedness and poor standard of living are the common problems found in the field works. Tea tribe coolie line falls under tea management authority and development is based on welfare schemes of tea estate management authority. However, both economic part of child labour and reducing of child labour are equally important in choosing the right policies and avoid unexpected counter effect. It should almost certainly include an equitable distribution of education, income among individuals and sexes.
