MEASUREMENT OF POVERTY IN NAGALAND: A MULTIDIMENSIONAL APPROACH

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY

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MEASUREMENT OF POVERTY IN NAGALAND: A MULTIDIMENSIONAL APPROACH

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Submitted

In partial fulfilment of the requirements for the Degree of Doctor of Philosophy in Economics of Nagaland University

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This is to certify that the Ph.D. thesis entitled **"Measurement of Poverty in Nagaland: A Multidimensional Approach"** submitted by Ms.Vithono Sale, Research Scholar in the Department of Economics, School of Social Sciences, Nagaland University, Lumami, bearing Registration No. Ph.D./ECO/00181 dated 20/08/2018, for the degree of Doctor of Philosophy in Economics of this University, is her original work and personal investigations. According to the best of my knowledge, this thesis has not been submitted for the award of any other degree of this university or any other university. The thesis is therefore forwarded for adjudication and consideration for the award of the Ph.D. Degree in Economics, Nagaland University.

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DECLARATION

I, Ms. Vithono Sale, bearing Ph.D. Registration No. Ph.D./ECO/00181 dated 20/08/2018, do hereby declare that my Ph.D. thesis entitled, **"Measurement of Poverty in Nagaland: A Multidimensional Approach"** is the record of original work done by me, and that the contents of this thesis does not form the basis for award of any previous degree to me or anybody else known to the best of my knowledge. This Ph.D. thesis has not been submitted by me for any other research degree at any other University/Institute.

This thesis is being submitted in compliance with the University Grants Commission Regulations, 2016. This thesis is being submitted to the Nagaland University, Lumami for the degree of 'Doctor of Philosophy in Economics'.

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PLAGIARISM FREE UNDERTAKING

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Dedicated, to My Loving and Beloved Mother…

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ABBREVIATIONS

AAR	: Annual Administrative Report
AF	: Alkire Foster
BPL	: Below Poverty Line
CEA	: Central Electrical Authority
CHC	: Community Health Centre
CPIAL	: Consumer Price Index for Agricultural Labour
CPIIW	: Consumer Price Index of Industrial Workers
DoSE	: Directorate of School Education
FHTC	: Functional Household Tap Connection
GMPI	: Global Multidimensional Poverty Index
HCES	: Household Consumption Expenditure Survey
HCR	: Head Count Ratio/ Head Censored Ratio
HDR	: Human Development Report
HDRO	: Human Development Report Office
HH	: Household
HPI	: Human Poverty Index
INC	: India National Congress
JJM	: Jal Jeevan Mission
MDGs	: Millennium Development Goals
MGNREGA	: Mahatma Gandhi National Rural Employment Guarantee Act
MMRP	: Modified Mixed Reference Period
MPCE	: Monthly Per Capita Expenditure
MPI	: Multidimensional Poverty Index
MRP	: Mixed Reference Period
MSPI	: Ministry of Statistics Programme Implementation
NBSE	: Nagaland Board of School Education
NHAK	: Naga Hospital Authority Kohima
NFHS	: National Family Health Survey
NPC	: National Planning Committee
NSS	: National Sample Survey

NSSO	: National Statistical Survey Office
NREGS	: National Rural Employment Guarantee Scheme
ODF	: Open Defecation Free
OPHI Oxford	: Oxford Poverty and Human Development Initiative, Oxford
PCE	: Per Capita Expenditure
PHC	: Primary Health Centre
PL	: Poverty Line
PMAY	: Pradhan Mantri Awas Yojana
PPP	: Purchasing Power Parity
PTR	: Pupil Teacher Ratio
RGGVY	: Rajiv Gandhi Gramin Vidyutikaran Yojana
SCERT	: State Council of Educational Research and Training
SDGs	: Sustainable Development Goals
SSA	: Sarva Siksha Abhiyan
TV	: Television
UN	: United Nations
UNDP	: United Nations Development Programme
UNECE	: United National Economic Commission for Europe
WB	: World Bank
WDR	: World Development Report

CONTENTS

Chapter 1

INTRODUCTION

This chapter contains the background of the study, literature review, research gap, statement of the problem, objective of the study, hypothesis, methodology, and organization of the study.

1.1. Introduction

Poverty has been an on- going battle for decades, and it has not decreased in spite of "thousands of analyses and hundreds of programmes to alleviate poverty" (Junofy, 2013, p. 147). "The threat of poverty has not yet become a thing of the past" (Fujii, 2016, p. 1). In spite of all the policy implications and means to eradicate poverty, it's an irony that poverty still exit in this 21st century where science and technology have progress so much. The Sustainable Development Goals (SDGs) of 2015 by the United Nation Member States is a call to action for all the developed and developing countries to eradicate poverty in all its forms by 2030.

Measurement of poverty is very crucial, for eradication of poverty as it helps in i. identification of the number of people who are below the poverty line, ii. keeping a track of the success of all the schemes initiated by the government for the elimination of poverty, iii. For the initiation of programs for the poor (Rohwerder et al., 2016, p. 5), and iv. Evaluation of "the economy in terms of the performance in providing a certain minimum standard of living to all its people".

There are many approaches to poverty measurements, but with their own sets of limitations, such as i) deprivation-based approach, where aggregating deprivation from different data source creating a problem, and ii) minimum level of consumption expenditure derived from the minimum expenditure on food and non-food items, where problem arise from non-food consumption (RANGARAJAN & Government of India Planning Commission, 2014, p. 2).

1.2. Measurement of Poverty from Dadabhai Naoroji to NITI Aayog

Measurement of Poverty in India goes back to 19th century, which is known by the famous book written by Dadabhai Naoroji in 1901 "Poverty and Un-British in India", where poverty line varying from ₹16 to ₹ 35 per capita per year was used, for the estimation of poverty, based on the cost of minimum food consumption (Garg & Shri Ram College of Commerce, University of Delhi, India, 2020, p. 987).

In 1938, the National Planning Committee (NPC) headed by Subhash Chandra Bose was formed setting a poverty line ranging from ₹15 to ₹20 per capita per month, with the aim of ensuring adequate standard of living for the masses, based on 'minimum standard of living perspective in which nutritional requirements are implicit' (*Poverty Estimation in India*).

In 1944, The Bombay Plan; where a group of powerful business leaders in Bombay, now Mumbai, recommended a poverty line ranging from ₹ 75 per capita per year with the goal of "development of a post-independence economy" (Garg & Shri Ram College of Commerce, University of Delhi, India, 2020, p. 987).

The Planning Commission, Government of India was the nodal agency in estimating poverty till the enforcement of NITI Aayog in 2015. The estimation was based on the incidence of poverty, measured by the poverty ratio known as the head-count ratio; expressed as the percentage of the number of poor to the total population based on per capita consumption expenditure per month at the national and state level separately in rural and urban areas (RANGARAJAN & Government of India Planning Commission, 2014, p. 9).

In 1962, the Planning Commission of India constituted a Working Group for estimation of poverty line for the people, where the Working Group estimated two poverty line ₹ 20 per capita per month for the rural areas and ₹25 per capita per month for the urban areas, based on minimum consumption expenditure, excluding expenditure on health and education.

In 1971, the first systematic assessment of Poverty in India was made by V.M Dandekar and N. Rath using National Sample Survey data (NSS) from 1960-61. According to them, poverty line should be derived from an expenditure capable of providing 2,250 calories per day in both the areas i.e., rural as well as urban (*Poverty Estimation in India*).

In 1977, the Planning Commission constituted a Task Force under the chairmanship of Dr. Y. K. Alagh for the estimation of poverty, which submitted its report in 1979. The average calorie requirement was estimated separately for rural and urban areas, and the poverty line which corresponded to the calorie/nutritional requirement. The rural India poverty line was estimated at ₹49.09 per capita per month as minimum consumption expenditure, which was associated with calorie intake of 2,400 per day and for the Urban India, ₹56.64 per capita per month as minimum consumption expenditure, was associated with calorie intake of 2,100 per day.

In 1989, Lakdawala Expert Group, was assigned by the Planning Commission, "to look into the methodology for estimation of poverty and to re-define the poverty line, if necessary", which submitted its report in 1993. The report was accepted in 1997. The expert group did not redefine the poverty line but instead retained the one defined by the Task Force by disaggregating the national poverty lines into state-specific poverty lines for showing the inter-state price differentials i.e., for Rural areas based on weighted average of the commodity group wise Consumer Price Index of Agricultural Labourers (CPIAL) and for Urban based on the weighted average of the commodity group-wise Consumer Price Index of Industrial Workers (CPIIW), which "captures the cost of living in the state more accurately as compared to the Task Force method" measured by Fisher's index (p. 12).

In 1997, the Government of India adopted Lakdawala Expert Group methodology of estimating poverty as the official estimation of poverty until January 2011, and estimated poverty ratio i.e., the percentage of people living below the poverty line, for the rural and urban areas of different states and Union Territories, simultaneously estimated poverty ratio for the national and the state.

In 2005, Tendulkar Expert Group constituted by the Planning Commission was formed under the chairmanship of Suresh D. Tendulkar which adopted the official measurement of Urban poverty line of 2004-5 based on Lakdawala Expert Group methodology, where, consumption expenditure was constructed by converting Uniform Reference Period (URP), into Mixed Reference Period (MRP) (p. 15). The report was submitted in 2009 and the recommendation was accepted in 2011. All India Rural poverty line for 2004-2005 was set at ₹446.68 of Monthly Per Capita Expenditure (MPCE) and all India Urban poverty line at ₹578.80 (p. 16).

In 2012, Rangarajan Committee; constituted by the Planning Commission headed by C. Rangarajan, "proposed to revert back to the earlier practice of having separate all India poverty line baskets for rural and urban areas by reference to which the state-level & rural and urban poverty lines will be derived" (p. 33).

Rangarajan Expert Group submitted its report on 2014 which preferred Modified Mixed Recall Period (MMRP) consumption expenditure data of the NSSO's and estimated the poverty line considering households ability to save (pp. 2-4). As per the Rangarajan Expert Group, most of the developing countries used "consumption basket linked to balanced diet as the poverty cut-off point" whereas, developed countries depended on the concept of relative poverty and in some countries, poverty line was defined "as an exogenously set proportion of mean or median income of the population" (p. 47).

The World Bank approach of estimating poverty US $1.25 per person per day was similar to India and most other developing countries, but the World Bank "does not allow for cost-of-living differential within countries and does not differentiate between transient and chronic poverty" which is imperative for employing strategy for poverty alleviation. (RANGARAJAN & Government of India Planning Commission, 2014, pp. 48-49).

The poverty ratio for the state Nagaland by different expert group using different methodology is presented in Table no.1.3. The table shows, for instance, for the year 2011-2012; poverty ratio by Tendulkar expert for Nagaland as 19%, whereas, for Rangarajan expert group, it was observed to be 32%. This revealed, for the same period

of time; poverty ratio differed using different methodology. This clearly indicated that, methodology of estimating poverty has a direct impact and influence on the rise and fall in poverty ratio as the same time, it plays a significant role in poverty estimation.

Table no.1.1: Poverty ratio for the state Nagaland

Nagaland		**Poverty Ratio in %**		
Expert Group	**Year**	**Rural**	**Urban**	**Total**
Lakdawala Method	1993-94	45.01%	7.73%	37.92%
	1999-2000	40.40%	7.47%	32.67%
	2004-05	22.3%	3.3%	19.0%
Tendulkar Method	2004-05	10%	4.3%	9.0%
	2009-10	19.3%	25.0%	20.9%
	2011-12	19.9%	16.5%	18.9%
Rangarajan Method	2009-10	11.1%	37.2%	18.3%
	2011-12	6.1%	0.8%	32.1%

Source: RANGARAJAN, C. & Government of India Planning Commission. (2014). REPORT OF THE EXPERT GROUP TO REVIEW THE METHODOLOGY FOR MEASUREMENT OF POVERTY. In *Government of India Planning Commission* (p. 1) [Report]. https://forms.iimk.ac.in/libportal/reports/232858161-Planning-Commission-report-on-poverty-estimates.pdf

In 2015, the Planning Commission was dissolved with the formation of NITI Aayog under the leadership of Shri. Narender Modi, for the estimation of poverty in India. In 2021, NITI Aayog in collaboration with OPHI and UNDP, released India's first Multidimensional Poverty Index (MPI) report based on National Family Health Survey data (NFHS-4), measuring deprivations in education, health and standard of living, which was first of its kind measuring poverty beyond income. It was reported, approximately about 25% of India's population were multidimensionally poor and of the state Nagaland 25.23% of the population were multidimensionally poor (*India: National Multidimensional Poverty Index: Baseline Report 2021 | OPHI*, n.d.).

The estimation of district wise poverty ratio by NITI Aayog for the state Nagaland based on NFHS-5 (2019-21) is presented in Table no.1.4. From the table, it can be

seen, the three top highest districts in poverty ratio as Tuensang district; 29.21%, followed by Kiphire district; 28.19% and Longleng district; 26.90%. It indicated that, in Tuensang district; 29% of the population, in Kiphire district; 28% of the population and in Longleng district; 27% of the population were multidimensionally poor, respectively. It was also observed from the table, the lowest headcount ratio as Kohima district (the district under the study), where, 7% of the population were multidimensional poor. The other district i.e., Peren district (under study) was ranked 6th in having the highest percentage of poor in Nagaland; where headcount ratio stands at 17.46%.

Table no.1.2: District wise Poverty Ratio of the state Nagaland

Sl. No	District	Headcount Ratio
1	Dimapur	7.23 %
2	Kiphire	28.19 %
3	Kohima	6.50 %
4	Longleng	26.90 %
5	Mokokchung	7.22 %
6	Mon	22.95 %
7	Peren	17.46 %
8	Phek	17.28 %
9	Tuensang	29.21 %
10	Wokha	11.99 %
11	Zunheboto	20.31 %

Source: India National Multidimensional Poverty Index 2023

1.3. Concept of Multidimensional Poverty

"Like slavery and apartheid, poverty is not natural, it is man-made, and it can be overcome and eradicated by the action of human beings," according to Nelson Mandela in his speech at the Make Poverty History Campaign in London in 2003 (Morduch, 2008, p. 23). Poverty can be recognized instantly when encountered but “often finds difficulty in saying precisely what it is” (Walker, 2005, p. 1). People are still captive to

poverty because of the way it is perceived and the way it is measured. “The way poverty is gauged affects how policy questions are conceptualized, how groups are targeted, and how countries determine progress in improving living standards” (Morduch, 2008, p. 25).

“There is no one scientific and universally agreed definition of poverty” (Ikejiaku, 2009b, p. 3) (Goulden et al., 2014, p. 3) (Zeumo et al., 2011, p. 7). Gwariro et al. (2017, p. 345) also commented on the definition of poverty that “there is no single correct definition of poverty”. According to Alkock (1997) “it is the issue of definition that lies at the task of understanding poverty, we must first know what poverty is before we can begin to do anything to measure it and before we can begin to do anything to alleviate it" (Ikejiaku, 2009a, p. 3,) as “different meaning of poverty and different way of measuring it leads in different way of tackling it, which results in different policy implementations” (Gwariro et al., 2017, p. 345, 346).

Until 1990 there was no widely accepted definition of poverty. It was only in 1990 that the World Bank in the World Development Report introduced $1 a day as the poverty line, which there after became widely used poverty measurement (nef (the new economics foundation), 2008, p. 5) (Hadiprayitno et al., 2021, p. 138). Global poverty was indexed at $1.90 per day based on 2011 PPPs, which was revised to $2.15 per day based on 2017 PPPs. At present, the new international poverty line set by The World Bank is $3 per person per day based on 2021 PPPs. A person whose income falls below the line is considered poor or living in poverty.

“It might seem to offer a clear and simple method of defining and measuring poverty but in reality, it is far from clear and prone to misinterpretation (nef (the new economics foundation), 2008, p.18). As “the proportion of people below the poverty line, does not reflect the intensity of poverty suffered by the poor” (Kakwani, N., 1980, p. 437). “Poverty line based either on income or consumption for measuring the standard of living, faced many measurement problems like overreporting/underreporting” (Mowafi & Khawaja (2005, p. 261). “It also results in meaningless poverty estimates because some people who are classified as poor have obviously greater control over commodities than, some people who are classified as

non-poor" (nef (the new economics foundation), 2008, p. 5). "Poverty line does not qualify as a meaningful indicator of actual poverty" (Bertram, 2012, p. 177), as it "can never serve the purpose of measuring well-being accurately" (O'Brian & Pedulla, 2010, p. 33). It "limits the understanding of poverty and also important indicators of poverty are at risk of being ignored if we consider income or expenditure to be the only aspects of poverty" (O' Brian & Pedulla, 2010, p. 35). Inadequate income is of concern as low incomes have a strong correlation with other measures/dimension of life (Morduch. 2008, p. 29), yet "it provides incomplete information about actual deprivation. Is the person unable to afford rent and thus living on the street? Is the family unable to purchase enough food so the adults in the household are going hungry? (O'Brian & Pedulla, 2010, p. 34).

The limitation of income poverty is the use of income data as such data are "drawn from randomized surveys" which are based on "respondents reported incomes" and, such "kind of information is subject to error" because "people don't always report their true income accurately" (Sarlo, 2019, p. 6). Poverty needs to be measured accurately as "the figure on which our view of poverty is based are potentially misleading, then we are in serious danger of adopting the wrong policies" (p. 2) or "if the numbers do not accurately reflect actual levels, patterns and trends of poverty" it may "distort what decision-makers decides about what should be done, how it should be done and what priority it should be given" (p. 6) (nef (the new economics foundation), 2008). Estimating poverty solely on unidimensional approach "never represents the whole situation of poverty within a country. It simplifies poverty and reduces all of the multidimensional aspects of poverty" (Titumir & Rahman, 2013, p. 6). Therefore, the reliability of poverty estimates is a critical issue.

In India, poverty line was officially estimated by the Planning Commission (presently known as NITI Aayog) who sets two different lines for rural and urban, based on monthly per capita expenditure. Bertram (2012, p. 160) examined two different government agencies in India in estimating Poverty; i). "*Official poverty* estimations i.e., how many people are counted as poor and living below a fixed poverty line and, ii). *Poverty targeting* i.e., who is counted as poor and living below the fixed poverty

line which reflects different poverty numbers. It indicates lack of general agreement about poverty and its causes".

Despite traditional way of estimating poverty has been criticized, even today it is "still imbedded in this income/consumption paradigm of poverty measurement" (Hasan, 2002, p. 6) (Morduch, 2008, p. 29). In spite of "the issue with income, it continued to be a preferred indicator for the empirical work in the study of poverty and inequality" (Sarlo, 2019, p. 6). In India the "poverty line is set at a very low level that is not sufficient to meet the mere necessities of life" (Bhattacharya, 2021, p. 226), and "developing a poverty line which provides a more accurate picture of the extent, depth, distribution and time trends of poverty in terms of actual living standards is important to our understanding of the world" as it can "help to ensure that we do not draw the wrong policy lessons from a distorted picture resulting from misleading definitions and measures of poverty" (nef (the new economics foundation), 2008, p. 40).

Over the past 30 years because of the limitation of money metric measure, there has been a significant change with regard to the concept and application of poverty which resulted in the "emergence of multidimensional conceptions of poverty" (Mowafi & Khawaja, 2005, p. 260), and "measuring poverty in a multidimensional space. "Eradication of multidimensional poverty has been at the centre stage of development agenda, yet, there are only a few studies that estimated multidimensional poverty in India" Dehury & Mohanty, 2015, p. 5), as "its application are still limited" (Mohanty, 2010, pp. 4-5) (Kumar, n.d., p. 3). "Poverty eradication program in India identifies the poor using the concept of multidimensional poverty but the official estimates of poverty continued to be derived from consumption expenditure data" (Mohanty, 2010, pp. 4-5) (Kumar, n.d., p. 3) and "despite the strong articulation of a multidimensional view of human poverty, it is not able to capture the multiple dimensions of poverty" (Madan, 2012, p. 82).

"If human poverty has to be eradicated, attention must shift from income poverty to the poverty and inequality of opportunities - economic, social and political" Kumar (n.d., p. 12). Poverty is a condition of "serious deprivation where a person lacks one or more basic need" (Sarlo, 2019, p. i). According to various studies on poverty, poor

people go beyond lack of income in defining poverty, as lack of education, health, housing, empowerments, humiliation, employment, personal security and more. It is "more than just income, although income is the major, most flexible resource that people can use to meet their needs" (Goulden et al., 2014, p. 6).

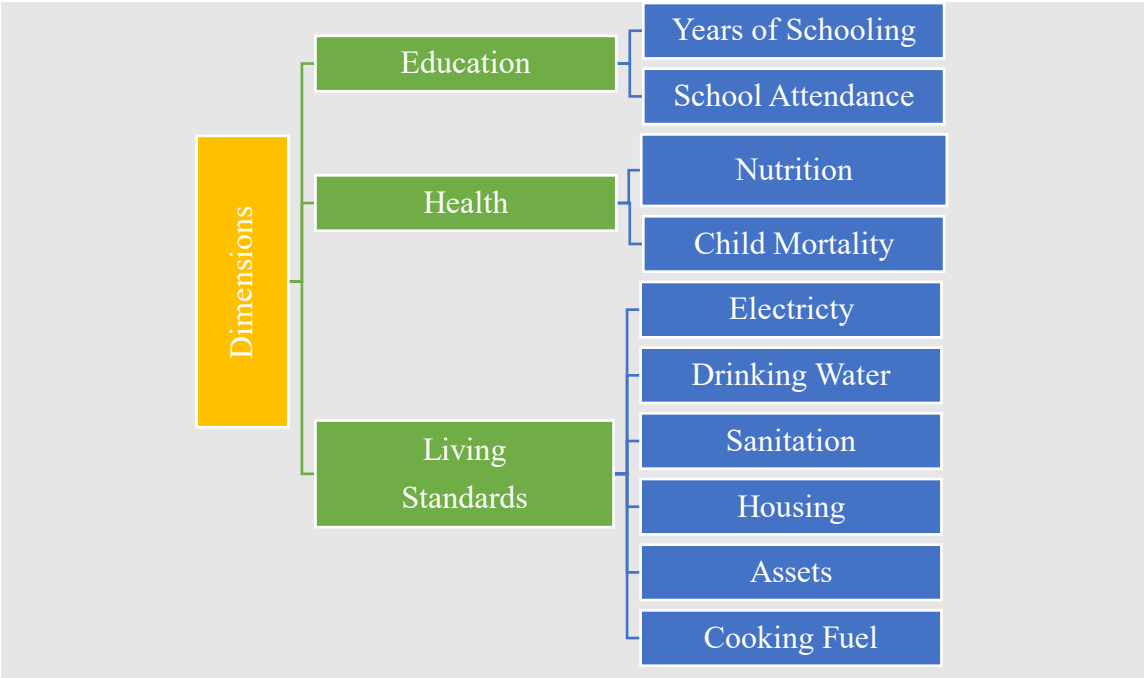
Is it possible to capture poverty by income measure alone, poverty being multidimensional? Income alone is an incomplete measure of well-being of any society (Madan, 2012, p. 81). "Counting poor based only on income deprived can lead to omitting a significant proportion of poor people in some areas and over reporting poverty in other areas. Income poverty measures serve as an incomplete guidance to address multidimensional poverty as it misidentifies deprivations in other dimensions. Thus, serving as an in sufficient policy guidance in other deprivations and dimensions" (Alkire & Foster, 2007, p. 1).

"Neither income nor expenditure can measure other aspects of well-being" (Rohwerder et al., 2016, p. 10). "One must go beyond the income space in order to get a more accurate measure of poverty" and that "a comprehensive measure of poverty is one which reflects multiple dimensions in which poverty manifests" (Abraham & Kumar, 2008, p. 78). Poverty being multidimensional so should the measure of estimating poverty. Thus, Anand and Sen (1997) (Alkire & Santos, 2010, p. 6) wrote "The need for a multidimensional view of poverty and deprivation guides the search for an adequate indicator of Human poverty". Because of which since 1997, Human Development Report have measured poverty in ways different than traditional based income measure. The Human Poverty Index (HPI) was the first such measure which was replaced by the Multidimensional Aspect of Poverty Index (MPI) in 2010, goes beyond the traditional measure of income in reflecting multiple deprivations battering a poor person in dimension education, health and standard of living. As measuring "nonmonetary deprivations" would help in "understanding where poor people live" which is "crucial for policymaking" (Alkire et al., 2023, p. 6, 13).

The structure of the Global Multidimensional Poverty Index is presented in Fig.1.1. The MPI is composed of three dimensions: health, education, and standard of living, which is measured using 10 indicators. Each dimension is equally weighted and each

indicator within a dimension is also equally-weighted. A household is identified as multidimensionally poor if and only if it is deprived in some combination of indicators whose weighted sum exceeds 30% of all deprivations. The MPI goes beyond the HPI and other poverty measures to capture how different groups of people experience concurrent deprivations" (Alkire et al., 2010, pp. 1-2).

Fig.1.1: Structure of the Global Multidimensional Poverty Index



Source: Alkire, S., Santos, M. E., Oxford Poverty & Human Development Initiative (OPHI), Oxford Department of International Development, & Queen Elizabeth House (QEH), University of Oxford. (2011a). MPI: Construction & Analysis. In *OPHI Research in Progress* (pp. 1–3) [Report]. Oxford Poverty & Human Development Initiative (OPHI), Oxford Department of International Development, Queen Elizabeth House (QEH), University of Oxford. https://ophi.org.uk/sites/default/files/OPHI-RP-31a.pdf

"Poverty is truly a multidimensional phenomenon and so requires a multidimensional policy and program interventions" where "multidimensional indices can provide with information for implementing socio economics policies that could be efficient in the long term" (Fusco et al., 2003, p. 27).

1.4. Literature Review

As an initiation of the study, the various literatures have been explored in understanding the multidimensional nature of poverty, its methodology and its application for achieving the research objectives.

Sen, A. (1976, p. 219) highlighted that despite the limitation, “the headcount ratio is widely used”.

Kakwani, N. (1980, p. 437) provided a generalization of Sen’s poverty measurement. The study acknowledged, “the proportion of people below the poverty line, as such does not reflect the intensity of poverty suffered by the poor. The problem is how poor are the poor. They may have income almost near the poverty line or they may not have any income at all”.

Ravallion and The World Bank (1996, pp. 1-3) commented on some current practices in poverty analysis using survey data. The study examined “sample surveys of household living conditions which have been used for over 100 years now to address public concerns about poverty, and to inform public action, where the common practice starts by identifying a single monetary indicator of household welfare, which is either the total expenditure on consumption or total income over some period. The study analyzed, the most common measure of estimating poverty is the headcount index, though large literature has since proposed and studied enumerable alternative measures, yet no single measure has toppled the headcount index from public attention. Despite its limitation, why has the headcount index remained so popular? Its simplicity is clearly the main reason” (p. 3).

Sarlo (2019, p. 4) argued for elimination of poverty it is important to understand its causes. The study acknowledged the measurement of poverty based on income approach “is subject to error as people don’t always report their true income accurately”.

Ikejiaku (2009b, p. 3, Alcock, 1997) illustrated the undeniable difficulty of defining poverty when he said, "it is the issue of definition that lies at the task of understanding poverty, we must first know what poverty is before we can begin to do anything to measure it and before we can begin to do anything to alleviate it"

Ravallion and The World Bank (1992) presented a guide to the concepts and methods in poverty assessment and stated; “poverty assessments are typically clouded in conceptual and methodological uncertainties” (p. v). “The most important reason for measuring poverty is probably not the need for a single number but to make a poverty comparison” (p. 1). “Counting the poor reveals nothing about gains and losses amongst the poor” (p. 2).

Morduch (2008) quoted Nelson Mandela speech on behalf of the ‘Make poverty History’ campaign in London in eliminating poverty worldwide “Like slavery and apartheid, poverty is not natural. It is man-made and it can be overcome and eradicated by the action of human beings” (p. 23). The study acknowledged “the world of poverty measurement in practice is one of compromise, of shortcuts and approximations” (p. 25). The study examined the concepts of poverty and stated; “the way poverty is gauged affects how policy questions are conceptualized, how groups are targeted and how countries determine progress in improving living standards” (p. 25). “A poverty line below which one is poor and above which one is not has a little empirical relation in the daily lives of the poor” (p. 31).

Alkire and Foster (2007, p. 2) rationalized about the need for multidimensional poverty measures as human life are baffle and intertwined with multiple aspects which assumed income indicator as a good proxy for reflecting multidimensional poverty as income indicators consider “people who are consumption poor nearly the same” as those who are malnourished, or uneducated etc. Thus, serving as an “insufficient policy guidance in other deprivations and dimensions. Counting poor based only on income deprived can lead to “omitting a significant proportion of poor people in some areas and over reporting poverty in other areas”.

Abraham and Kumar (2008) highlighted the World Development Report 2000-01 on Poverty and described poverty as “pronounced deprivation in well-being” (p. 77). The study acknowledged, “one must go beyond the income space in order to get a more accurate measure of poverty” (p. 78) and stated; “a comprehensive measure of poverty is one which reflects multiple dimensions in which poverty manifests” (p. 78). The study attempted to capture the vulnerability to multidimensionality of 15 Indian states,

by comparing the ranking outcome of the income poverty measure and multidimensional poverty measure, the result showed "states that were income poor were also poor in all other dimensions. But at the same time, states that were identified as not income poor but were identified poor in other dimensions". With this finding they justified; "multidimensional perspective would have been overlooked if the conventional measures were used" but it would bring to "the attention of the policy makers if a multidimensional measure of poverty was applied" (p. 86).

Ikejiaku (2009b, p. 3) conceptualised poverty in the context of the developing countries specially that of Sub-Saharan Africa. The study acknowledged poverty as more than lack of income or resources and how it affects individual capabilities; inability to access healthcare, education, clean water, sanitation, adequate nutrition and overall well-being. The study accepted "recognising what something means in practice is much easier than defining or analysing it." The study clearly acknowledged, the lack of "scientific and universally agreed definition of poverty" because of which there is "the problem of understanding poverty and the policies that has been developed in response" to it. He quoted Alcock, (1997), 'it is the issue of definition that lies at the task of understanding poverty, we must first know what poverty is before we can begin to do anything to measure it and before we can begin to do anything to alleviate it" (p. 3), the statement is clearly an indication of the problem of the definition of poverty and emphasized the need to understand poverty beyond monetary measures.

O'Brian and Pedulla (2010, pp. 31-34) examined poverty estimation in United States and calls out for a new approach to measure it, if "our goal is to achieve a better measure of well-being in order to diagnose human needs and design effective solutions, as no line—no matter how thoughtful or sound—will do.". With regard to the new poverty measure, Bloomberg the then mayor of New York stated, "If we are serious about fighting poverty, we also have to start getting serious about accurately measuring poverty. We can't devise effective strategies for tackling poverty until we understand its full dimensions.".

Mohanty (2011) acknowledged the fact that, poverty has been accepted multidimensional "among economists, development thinker, social scientist, public

health professionals, policy makers and international organisations and included in the development agenda, yet its measurement and application are still limited" (p. 4). The study highlighted, "poverty eradication program in India which identifies poor using the concept of multidimensional poverty but the official estimates of poverty continue to be derived from consumption expenditure data" (p. 5). The study recommended moving from "consumption poverty to multidimensional poverty in planning and programme implementation of the centre and state governments by developmental agencies and various organisations and suggested for more research be undertaken to arrive at more precise estimate of poverty" (p. 36).

Alkire and Santos (2010b, p. 1) presented a new Multidimensional Poverty Index for 104 developing countries, the first multidimensional poverty estimated using micro dataset (household surveys) covering about 78 percent of the world´s population. The index is composed of 10 indicators and three dimensions which is associated with the HDI dimensions. "The MPI captures a set of direct deprivations that batter a person at the same time", which can be used for targeting the poorest, tracking MDGs, designing policies which directly address the "interlocking deprivations".

Alkire and Santos (2010b, pp. 6-7) acknowledged, "Sen's perspective that has implications on poverty measurement" and quoted, Anand and Sen 1997 "the need for a multidimensional view of poverty and deprivation, guides the search for an adequate indicator of human poverty". The study assessed the MPI, where "a household is identified as multidimensionally poor if, and only if, it is deprived in some combination of indicators whose weighted sum is 30 percent or more of the dimensions".

Alkire and Santos (2010b, pp.7-64) presented the criteria regarding the dimensions, indicators, and deprivation. Mathematically, M_0 is known as the Adjusted Headcount Ratio, which "measures poverty in d dimensions across a population of n individuals". For the identification of the poor, two poverty cut-offs are applied, first cut-off is in identifying "all individuals who are deprived in any dimensions" (p. 9) and second is the cut-off "needed to identify who are to be considered multidimensionally poor. M_0 can also be expressed as the product of two intuitive measures: the (multidimensional) headcount ratio (H) and the average deprivation share among the poor (A)" (p. 10).

"Another important characteristic of M_0 is that it is decomposable by population subgroups" and "additionally, after identification, M_0 can be broken down by dimension" (p. 11). The study summarized the new method and key findings of the MPI and, displayed how the MPI can be used in estimating multidimensional poverty. It was also observed, "the poor people identified by the MPI are not necessarily the same as the poor people identified by international income poverty criteria" (p. 63), which "reaffirms the need for an internationally comparable multidimensional poverty index to complement income poverty measures" (p. 64).

Alkire and Santos (2011) summarized the purpose of MPI, its construction and analysis, and explained the difference between multidimensional poverty and income poverty and how the MPI is connected to the MDGs now known as SDGs. The study highlighted, two version of the MPI; one is the global MPI and the other is the regional or national MPI; for assessment of multidimensional poverty specifics to countries or regions. The study acknowledged, the traditional concept of measuring poverty as one-dimensional concept based either on income or consumption which do provide useful information, "yet poor people themselves define their poverty much more broadly to include lack of education, health, housing, empowerment, employment, personal security and more" because of which, "since 1997, Human Development Reports (HDRs) have measured poverty in ways different than traditional income-based measures. The study acknowledged, Human Poverty Index (HPI) was the first such measure, which was replaced by the Multidimensional Poverty Index (MPI) in 2010" (p. 3).

Alkire and Santos (2011) summarized the concept of income poverty. The study acknowledged income poverty as, "sufficiently good proxy for other deprivations such as malnutrition, low education and poor housing conditions" at the same, acknowledged, "some necessary/basic needs are not satisfied or provided in the market for example being access to clean water and education, which are sometimes provided by the state. Thus, a family may enjoy the minimum income and still not have the basic needs. On the other hand, in certain places or areas where the state or NGO have a very strong presence, households who do not have minimum income level but still access goods and services. Second, each household has a different capacity to convert income

into satisfaction of needs. Third, income is merely a means to ends. It is the ends which are valuable, not the means. We are interested in whether a person has certain cognitive skills, not whether she has the income to attend school. We are interested in whether a person is well nourished, not whether she has the income to be so" (p. 28), and fourth, income poverty is unidimensional: if we know a person is income poor, that is all we know about them. Whereas if we know they are multidimensionally poor, we can then (with the AF method) take the next step and see how they are poor – look at the deprivations they experience at the same time. This gives direct and important information for poverty reduction" (p. 29). Thus, "income is not always a good guide to whether people have access to what they find valuable and necessary in life" (p. 28).

Madan (2012) explained that though the traditional way of capturing poverty has been based on income approach. "Income alone is an incomplete measure of well-being of any society" (p. 81). He examined in India, the Planning Commission define poverty based on a poverty line as a minimum consumption expenditure requirement for an average per capita food energy norm of 2400 and 2100 calories per day for rural and urban areas, respectively and the required per capita income, to get minimum food to meet the required calorie as Rs. 328 ($8) and Rs.456 ($11) per month in rural and urban areas respectively at 1999-2000 prices, which was revised in 2012 to Rs. 22.42 ($ .44) and Rs. 28.35 ($.56) per day in rural and urban areas, respectively, to meet minimum consumption expenditure (p.82). The study stated "despite the strong articulation that of a multi-dimensional view of human poverty, it is not able to capture the multiple dimensions of poverty" (p. 83). As per the UNDP 1990 Development focus must be people (p. 82). Thus, the main "goal of development is freeing people from poverty as poverty is synonymous with poor quality of life, deprivation, malnutrition, illiteracy, indicating low level of development" (p. 83). The study also suggested, for the success of poverty alleviation program, it is necessary to define poverty appropriately (p. 83). The study used the "new perspective, i.e., multidimensional poverty, which brings out anti-development growth process of the economy which calls for immediate attention of policy planners" (p. 92).

Krishnaji (2012, p. 10) recommended "there is no case whatsoever to construct poverty line based on a calories or expenditure norm; all such lines are arbitrary and do not

take into account the different dimensions of poverty. It is far better to focus on disaggregated information on a variety of parameters- education, housing, clothing, health, etc.- which can give us unambiguous information about the different facets of poverty over the course of time".

Bertram (2012) highlighted the goal of MDGs to "halve the proportion of the people living in poverty worldwide by 2015" which clearly is an "appeal to India's anti-poverty policy, in case, poverty alleviation efforts are successful in India, it will have a significant impact on world-wide poverty statistics" which would then, "serve as a role model for other developing countries in their battle against poverty" (p. 160). The study presented the two different government agencies in India, using different approaches which would eventually give different numbers in estimating Poverty. One, Official poverty estimations i.e., how many people are counted as poor and living below a fixed poverty line and second, Poverty targeting i.e., who is counted as poor and living below the fixed poverty line which reflect different poverty numbers. It represented lack of general agreement about poverty and its causes and emphasise on the need for a clear definition of poverty and a coherent methodology for its measurement (p. 160, 161). The study acknowledged, "the correct measurement of poverty is important for estimating the level of poverty challenge within a context, for the formulation of policies and assessing their effectiveness. However, poverty measurement is never a simply and collating exercise" (p.163) and pointed out, "poverty line does not qualify as a meaningful indicator of actual poverty" (p. 177) because of which "a uni- dimensional perspective on poverty does not do justice to the intensity of poverty" (p. 183) and "important indicator of poverty are at risks of being ignored if we consider income or expenditure to be the only aspect of poverty" (p. 183).

Titumir and Rahman (2013, p. 6) pointed that there are vast literatures on poverty but the methodological grounds on the causes of poverty is still weak and stated, estimating poverty solely by unidimensional approach "never represents the whole situation of poverty within a country. It also simplifies poverty and reduces all of the multidimensional aspects of poverty".

Alkire and Seth (2013) examined the extent of poverty reduction in India, where and how it has taken place. Alkire and Seth created an "adaptation of the global MPI proposed by Alkire and Santos (2010) reported by UNDP's Human Development Report since 2010; which was done to compare poverty estimates using the NFHS datasets for 1998/9 and 2005/6. The study mentioned that, between 1999 and 2000, the MPI in India decreased by 0.050 units or by 16% from 0.300 to 0.251. The study revealed, "the decline was mainly due to reduction in the percentage of people identified as poor. The reduction in the intensity was smaller but significant" (p. 1). The study also acknowledged, "progress in reduction has been comparatively less as when compared to income poor countries like Nepal and Bangladesh. The reduction in national MPI has not been uniform across different groups- ST, Muslims, female headed household, households whose head had no education and the poorest states showed slower reductions in poverty". The study acknowledged, the disturbance as it "contrasts sharply with trends in income poverty reduction from 1993/4 to 2004/5 across states. It could not be updated as NFHS survey has not been repeated and nor do the National Sample Survey dataset include the required questions." The study pointed out, "the global MPI uses a fraction of the questions in most Demographic and Health surveys such as the NFSH just 39 out of the 365 questions" (p. 1,4).

Alkire et al. (2015) acknowledged in order to eradicate poverty (using Alkire and Foster methodology identified where the poorest) it is imperative to know where the poorest live and, suggested, for targeting or for implementation of policy to consider MPI at different levels of geographic or social disaggregation as it can be easily computed and analysed. It was observed, "the bottom billion poor people, according to national poverty aggregates, live in 28 countries. The population-weighted average MPI of these countries was MPI=0.325. Of these people, 65.4% were from two South Asian countries (India and Afghanistan), 33.7% were from Sub-Saharan African countries and merely 0.9% are from two countries -Somalia and Timor Leste. Of the 28 countries, India had the lowest MPI of 0.283 and the lowest headcount ratio of 53.7%. Given its large population, India alone was home to 63.6% of the bottom billion" (p. 8).

Shiekh (2016) highlighted the limitation pointed out by some economist regarding the official methodology of estimating incidence of poverty by the planning commission and criticized the claims made regarding the decline in poverty from 1977-78 and to 1994-95, which compelled for re-examining the estimation of poverty and because of which Expert Group in 1989 was constituted to "consider methodological and computational aspects of estimation of proportion and number of poor in India" (p.212). In 1993, the expert group set the MPCP for ₹49 for rural areas and ₹56.64 for urban respectively. It reported that, "urban poverty ratio has been estimated to be higher than rural poverty ratio". The estimation of the 55th round of NSS (National Sample Survey) were criticized for being "incomparable with the earlier estimates of poverty due to change in methodology of data collection". Studies also showed a decline in poverty from 1993-94 and 1999-2000, however "regional disparities as well as economic inequality within states increased during this period" (p. 213). The estimation of poverty by NSS0 61st round did not go well as it was "heavily criticized by the experts" as the result showed that urban poverty ratio to be too low as compared to its rural counterpart. As 2009-2010 was faced by severe drought, NSSO repeated its survey on 2011 as NSS 68th round, released on June 2013. Tendulkar poverty line was criticized for being too low, the planning commission constituted an expert group in 2012 chaired by Dr. C. Rangarajan. Based on Tendulkar methodology MPCP was calculated on 3 concepts: a. Uniform Reference Period (URP), b. Mixed Reference Period (MRP) and, c. Modified Mixed Reference Period (MMRP), which were computed by National Sample Survey Organization. In 2011-12, in India 270 million people were living below the poverty line, 25.7 percent in rural areas 13.7 percent in urban areas and 21.9 % for the overall India. Poverty was estimated at ₹816 per capita per month for rural areas and ₹1000 per capita per month for urban areas.

Mehta et al. (2001) summarized the current state of chronic poverty in India and identified agendas for further research. The study acknowledged, "poverty is the sum total of a multiplicity of factors that include not just income and calorie intake but also access to land and credit, nutrition, health and longevity, literacy and education and safe drinking water, sanitation and other infrastructural facilities" (p. 2). The study examined and observed that, in 1970s; 80% of the poor resided in rural areas. In 1993-

94, 37.2% of people below the poverty line resided in rural areas and 32.2% of people in urban areas, where poverty line was set at ₹205.84 per capita per for rural and ₹281.35 for urban areas. In 1999, World State of Food insecurity reported that, 790 million people in the developing world do not have enough to eat and India alone have "more undernourished people, 240 million than all of sub-Saharan Africa combined" (p.19). Hunger was more prevalent in rural than urban.

Bhattacharya (2021) affirmed "poverty is uncontrollable in India" because of "high rate of population growth and lack of proper comprehensive pro-poor programmes by the government" (p. 221) and specified that, "poverty-stricken people and families have to live without proper housing, clean water, healthy food and medical facilities" (p. 226). The study indicated that, in India the "poverty line is set at a very low level that is not sufficient to meet the mere necessities of life". The study also suggested, "government should come forward and be sensitive to the poor and comprehensive poverty eradication programmes be implemented properly" (p. 226).

Hatti et al. (2015) acknowledged "even after decades of planning, the rate of reduction in poverty and inequality has remained painfully slow and large sections of the population continue to suffer from chronic deprivation" (p. 251). The method of estimating poverty based on head count ratio was questioned. Another indicator which "captures the failure of economic growth in a country" is under-nutrition. "A positive impact in reducing the incidence of under-nutrition if macroeconomic growth and higher per capita income is evenly distributed. Cross country studies have also shown that income growth has a positive impact on reducing malnutrition". It is also observed in several districts in India the severity of "incidence of under-nutrition and nutrition related deaths" (p. 256).

Gwariro et al. (2017) acknowledged "there is no single correct definition of poverty" (p.345), and "different meaning of poverty results in different policy implementations" (p.345). The study analyzed the concept of poverty using the eight steps of Walker and Avant's strategic method and remarked about reduction, UN 2015 eradication of poverty by 2030 which seems "obscured" because of the way poverty was defined and measured as "different meanings of poverty and different ways of measuring poverty

led to different ways to tackle it" (p. 346). The study acknowledged that for reduction/eradication of poverty "political commitment is needed and genuine facts in addressing poverty eradication are needed" (p. 246). The study reviewed article from 1995 to 2017 regarding poverty and its concept and acknowledged, "the broadest approach to well-being and poverty" (p.347) was "articulated by Amartya Sen in 1987" (p. 347), and according to Sen, "when people lack certain capabilities in the society, they have poverty" (p.347), lack of "income, education, health" (p.347), etc., which clearly revealed the concept of poverty as multidimensional phenomenon.

Mowafi and Khawaja (2005, p. 260) acknowledged that over the past 30 years there has been a significant changed with regard to the concept and application of poverty which resulted in the "emergence of multidimensional conceptions of poverty." The study also acknowledged the limitation of poverty line being used as a measure to distinguish poor from non-poor based either on income or consumption/expenditure data, stating that it faced many measurement problems like overreporting/underreporting, on the other hand expenditure data, "contain monetary values for goods consumed and so may be used to price a basic needs basket" (p. 261). The study discussed and differentiated human poverty and multidimensional poverty by stating that human poverty as a "deprivation in a long and healthy life, in knowledge, in decent standard of living, in participation" and multidimensional poverty as "deprivation not only as lack of material goods, but also as deficiency in other important areas such as social capital, human capital, power, and voice" (p. 262) and pointed about the World Development Report 2000/2001, where health was discussed as main factor of poverty and should be "addressed to mitigate this factor" (p. 263).

nef (the new economics foundation) (2008) acknowledged that poverty needs to be measured accurately as "the figure on which our view of poverty is based are potentially misleading, then we are in serious danger of adopting the wrong policies" (p. 2) or "if the numbers do not accurately reflect actual levels, patterns and trends of poverty" it may "distort what decision-makers decides about what should be done, how it should be done and what priority it should be given" (p. 6). Therefore, the reliability of poverty estimates is a critical issue. Until 1990 there was no widely accepted

definition of poverty, the World Bank in the World Development Report 1990 introduced $1 a day as the poverty line, which became widely used but it had its limitations as pointed out by observers and analyst as “it leads to meaningless poverty estimates, as some of those identified as poor have clearly greater command over commodities than some of those identified as non-poor” (p. 5). “It might appear to provide a clean and easily understood way of defining and measuring poverty consistently on the global level. In practice, however it is far from clear, and prone to misinterpretation by the uninitiated” (p. 18).

nef (the new economics foundation) (2008) suggested “developing a poverty line which provides a more accurate picture of the extent, depth, distribution and time trends of poverty in terms of actual living standards is important to our understanding of the world” as it can “help to ensure that we do not draw the wrong policy lessons from a distorted picture resulting from misleading definitions and measures of poverty. Ultimately, however, improvements in our understanding and measurement of poverty will serve little purpose if they do not lead us to the next step – effective action, not merely for poverty reduction, but for a permanent eradication of the blight of poverty in a meaningful sense” (p. 40).

Khwairakpam and Soundrya Singh (2018) addressed population shared by poverty. The study made a comparative study of poverty level at state level in India for both rural and urban. According to United Nations, human right is about quality of life on earth, right to standard of living necessary for health and well-being, food, clothing and the likes. The paper addressed that though, Government of India have initiated many programmes and schemes for population of BPL to improve their quality of life, still there are some states that have higher percentage of poverty, which suggested the need for attention that has to be given to the poorer section of the society in order for the human right goal of improving the quality of life to be achieved.

Junofy (2013) acknowledged poverty level has not decreased in spite of “thousands of analyses and hundreds of programmes to alleviate poverty” (p. 147).

Kumar (n.d.) examined “despite the strong articulation of a multidimensional view of human poverty, India has been overwhelmingly concerned with income poverty” (p.

3), and the report of the Working Group "set the trend for defining and measuring income poverty" based either on income or consumption. The policy maker focused on the narrow concept of poverty as income deprivation, and the difference in methodology and assumptions gives rise to different estimation of poverty. For example, in 1993-94, only 19% of the population was found to be below the poverty line by the Planning Commission, whereas, as per National Sample Survey Organization it was 36%. In 1997, Government of India, accepted the recommendation of the Expert Group and rejected the planning commission estimation of poverty in 1993. "Despite the decline in proportions, the number of income poor has been increasing due to the growth in population" (p. 5). The study suggested that "If human poverty has to be eradicated, attention must shift from income poverty to the poverty and inequality of opportunities - economic, social and political. India needs sustained public action to be guided by strong human development priorities".

Alcock (1997b) discussed the definition of poverty, the changed and development over time, and argued that, "it is the issue of definition that lies at the heart of the task of understanding poverty. We must first know what poverty is before we can identify where and when it is occurring or attempt to measure it, and before we can begin to do anything to alleviate it" (p. 67). The study also acknowledged "the need for definition is in fact recognised by most of the major researchers and commentators on poverty issues" (p. 67).

Atkinson (1987, p. 749) re-examined the three basic issues in measuring poverty i.e., "the choice of the poverty line, the index of poverty, and the relation between poverty and inequality" and acknowledged, for poverty measurement, most of the studies employ the head count, or the proportion of the population under poverty.

Sarlo (2019) stated that poverty as a condition of "serious deprivation where a person lacks one or more basic need-as opposed to a condition of inequality" (p. i), and discussed about measurement issue of poverty. The study highlighted the problem of using income data, as the data are "drawn from randomized surveys" which were basically based on "respondents reported incomes" such "kind of information is subject to error" because "people don't always report their true income accurately"

reason being tax evasion whereas, Consumption data are superior to income data as the information is about households' expenditure but it comes with its own sets of limitation. Despite the issue with income, it continued to be a preferred indicator for the empirical work in the study of poverty and inequality" (p. 6).

Morduch (2008) cited Nelson Mandela speech during the Make Poverty History Campaign in London in 2003, "Like slavery and apartheid, poverty is not natural, it is man-made, and it can be overcome and eradicated by the action of human beings" (p. 23). The study acknowledged "the world of poverty measurement in practice is one of compromise, of short-cuts and approximations and the way poverty is gauged affects how policy questions are conceptualized, how groups are targeted, and how countries determine progress in improving living standards" (p. 25). The study also acknowledged, the earliest definitions of poverty were "centered on the inability to obtain adequate food and other basic necessities", at present the focus were centered on "material deprivations, i.e., the failure to command private resources" (p. 27).

Morduch (2008) remarked "though estimation of poverty based on income have issues still social scientist finds it useful to define poverty as lack of income, measured basing either on low income or inadequate expenditure. Inadequate income is of concern as low incomes have a strong correlation with other measures/dimension of life" (p. 29), and "a poverty line normally states the income or the level of spending which is required to purchase a bundle of necessaries goods such as food, clothing, shelter, water, electricity, schooling, and healthcare. Identifying the poor as those with income (or expenditures) below a given line brings clarity and focus to policy making and analysis". A poverty line permits experts "to count the poor, target resources, and monitor progress" as well as "a poverty line below which one is poor and above which one is not has little empirical correspondence in the daily lives of the poor, yet, poverty measures based on poverty lines serve an important descriptive purpose "(p. 31) and were used for comparison of progress across different countries and within a country.

Deaton and Kozel (2005) debated and reviewed politically and statistically about what happened to poverty in India in 1990s and briefed an introduction about Indian Poverty Monitoring System, where consumption expenditure survey was conducted by NSSO,

surveys pioneered by P.C. Mahalanobis in the 1940s and 1950s. With regard to poverty lines, Deaton and Kozel (2005) asserted that, “although poverty lines are often linked to the amount of money needed for a minimally adequate diet, the use and long-term survival of poverty lines depend on the policymaker and others accepting them as useful” (p. 190). “Without proper poverty monitoring system it is impossible to “pursue a coherent antipoverty strategy” (p. 194) and therefore, lessons for statistical offices were that, since major poverty survey occurs only every 5 or 6 years, “the failure of even one survey means there is no reliable estimates of the rate of poverty decline for more than a decade” and lessons for policy maker was that, they are “accountable to the public for poverty reduction, and progressed cannot be monitored without an adequate statistical data” (p. 195).

Goulden et al. (2014) explained the JRF definition and challenges in defining poverty. JRF definition of poverty stated, “When a person’s resources (mainly their material resources) are not sufficient to meet their minimum needs (including social participation)” and “there is no universally agreed set or definition of human needs” (p. 3). Resources are what people can use to meet their needs. In terms of a poverty definition, it is material resources that matter” which are “the material possessions and finances that a person controls, and in-kind goods, commodities or services.” The “financial resources and assets that people own or control are the main determinant of whether or not they are defined as being in poverty” and these are “income (from employment, benefits, pension, interest on savings, gifts); financial assets (savings, a home); material goods (e.g. washing machine, car, computer)” and in-kind goods and services are “most health services; children’s education; passported benefits (additional benefits that some groups of people are automatically entitled to as a result of receiving an initial benefit), for example free school meals” (p. 4). From the definition it were cleared that, poverty is “more than just income, although income is the major, most flexible resource that people can use to meet their needs” (p. 6) and regarding measurement of poverty, “the indicators that may be most robust for benchmarking overall progress over time, or against other countries, may well differ from those that would be used in designing policy – either to identify those in poverty today, or to tackle the causes of future poverty” (p.7). It is also acknowledged that, the

definition of poverty "should not be broadened out too far. Otherwise, an anti -poverty strategy risks becoming diluted (e.g. into well-being) or diverted (e.g. onto mental health or drugs). It should be grounded in material conditions and minimum standards" (p. 8).

"Definitions and Measures of Poverty" (2015) defined poverty as a multidimensional concept which measured the level of deprivation faced by individual, household or community, based either in terms of "lack of resources (e.g. income, assets), capabilities (e.g. skills, knowledge, technology) or both" (p. 1). The study specified in income poverty measurements, "a person (or household) is considered poor if the person's (or household's) income cannot acquire the basket of goods and services used to define a threshold for poverty", where "concerns about its limitations as a tool for assessing people's level of deprivation" have "led to definitions that consider other non- monetary aspects such as human rights values enshrined in the UN Human Rights Charter, The UN Development Programme's Human Development Index had integrated more dimensions to the income/expenditure measures" and Human development was defined "as the process of enlarging people's freedoms and opportunities and improving their well-being" (p. 2). "The poverty line determines the threshold of income or expenditure, separating poor and non-poor people and the incidence of poverty (headcount index), determines what percentage of the population (or households) live below the cut-off point. Different poverty lines yield different headcount indexes within a given income distribution pattern" (p. 3). The headcount ratio, alone, was "not sufficient in determining how populations fare compared with the rest of the population living above the poverty line" (p. 4).

N. Kumar et al. (2024) briefed about poverty and equity. The study acknowledged; India's official poverty estimation which goes back to 2011; however, it was reported that, the Ministry of Statistics and Programme Implementation had released a summary for the Household Consumption Expenditure Survey (HCES) for the year 2022-23, based upon Modified Mixed Recall Period (MMRP) which was adopted in 2011-12 for measuring poverty. The study reported that, about 40% of the population in India were below the low-middle income poverty line of $3.65 (2017 PPP). As per, the National Family Health Survey 2019-21, 16.4% of the population was affected by non-

monetary poverty, lack of education, health, or living standards. The unemployment rate declined 1.3%, with unemployment falling from 7.2% to 6.5% between July-September 2022 and October- December 2023. It was also reported that, youth not engaged in education, employment, or training declined from 32% to 29.6%.

Alok (2020) affirmed that mitigation of poverty "has been on the national policy agenda for more than seventy years. In 1938, the Indian National Congress set up a National Planning Committee (NPC) headed by Jawaharlal Nehru, which made a declaration that the social objective of the Indian government should be to ensure an adequate standard of living for the general masses, in other words, to get rid of the appalling poverty of the people'. The importance of reduction in poverty and provision of other basic needs has been emphasized in all the five-year plans since independence particularly since the Fifth Five-Year Plan. Poverty estimates were revised with each quinquennial NSS survey and price indices were used to adjust for price changes over time. The latest estimates on poverty based on National Sample Survey (NSS) data show that poverty in India in 2011-12 was around 22 per cent" (p. 175). Prior to the Planning Commission been dispersed by the Modi government in January 2015, the data on poverty regarding the percentage of Indian population living below poverty line had been released by the planning commission. NSSO report of 2011-2012 suggested that despite the decrease in poverty ratio across the state, there were very big gap in the percentage of poor living below the poverty line. For example, in Bihar the poverty ratio fell from 54.4 percent in 2004-2005 to 33.7 percent in 2011-2012, but in Arunachal Pradesh instead of it falling, it rose by 3.6 percent that is, it rose from 31.1 percent to 34.7 percent. Whereas in Delhi the decrease was only 3.2 percent, whereas in Assam it was only 2.4 percent, which reveals inequality an indication that "bureaucratic machinery and political leadership have not been able to bring about any uniform transformation in the reduction of poverty" (p. 176) "Initially poverty was only supposed to be limited in rural areas. Although in India people from both rural and urban part are suffering from problem of poverty" (p. 178).

Hadiprayitno et al. (2021) addressed poverty in the context of the human right to development and stated, "drawing of an arbitrary line to distinguish the poor from the non-poor can be traced back to England in the 1880s" where, the concept is being

credited to Charles Booth because of which “many countries have adopted different criteria for the definition of poverty through income grouping. The World Bank played a major role in establishing the first unified international standard for the measurement of poverty in the 1990s with reference to those earning less than $1 a day” and in 2000 the United Nations adopted the Millennium Development Goals, aimed at the eradication of extreme poverty and hunger. The study asserted that “income-based poverty spread during the twentieth century but was intensely criticized for the simplification of the issue and acknowledged that, multi-dimensionality of poverty progressed dominantly among the scholars and economists because of Nobel economics laureate Amartya Sen, who was responsible for introducing the capabilities approach, concerned with rights and freedoms. The World Bank, The UNDP, and the like considered poverty to be more than income. HDI by UNDP is an index which measure human development. Although it is not a poverty indicator per se, the Human Development Index is fundamentally related to poverty. Amartya Sen, in the early 1990s, “proposed, in partnership with Oxford University, a framework called the Multidimensional Poverty Index, using 10 indicators to reinforce the tripartite structure” (p. 138), which examined poverty “through a human right lens” (p.139) which stated that , “Poverty is a complex human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living” (p. 146).

O’Brian and Pedulla (2010) declared “now is the time to improve our measures of poverty. If our goal is to achieve a better measure of well-being in order to diagnose human needs and design effective solutions, no line—no matter how thoughtful or sound—will do.” (pp. 31-34). With regard to the new poverty measure, Bloomberg stated, “If we are serious about fighting poverty, we also have to start getting serious about accurately measuring poverty. We can’t devise effective strategies for tackling poverty until we understand its full dimensions.” (p. 32).

O’Brian and Pedulla (2010) briefed about the limitation of poverty line as, “no poverty line, regardless of how well conceived or how well intentioned, can provide the information needed to better serve their community. A line cannot provide information about the depth or intensity of deprivation. It cannot tell us about the duration of

poverty. It does not provide direct information about actual deprivation, such as homelessness or hunger. In addition, a poverty line does not provide any information about the correlates or causes of poverty. Finally, a simple line limits our understanding of poverty to the economic realms, ignoring the social and political dimensions of exclusion and marginalization. A poverty line does not provide information about the depth or intensity of poverty. Those people labeled as poor could all be concentrated just below the poverty line, or they could be concentrated near zero income" (p. 33). A poverty line does not provide information about how long people have been poor. Although income is highly correlated with a person's material circumstances, it provides incomplete information about actual deprivation. Is the person unable to afford rent and thus living on the street? Is the family unable to purchase enough food so the adults in the household are going hungry?" These calls for different programme to alleviate the problem. "In addition, the poverty line does not provide important information about a person's health, something that is intimately connected to poverty. People who are poor are more likely to have health problems and less likely to receive adequate care for those problems. At the same time, people who have health problems are more likely to be poor because of their inability to participate fully in the labor market. Poverty lines are unable to account for this important correlate of poverty, which is problematic because health interventions can play an important role in reducing poverty. Last, knowing that a family is below the poverty line does not tell us the extent to which they are otherwise integrated into society" (p. 34). The study suggested, "measuring poverty accurately is a must, but alone it is not enough. We need to expand our understanding of poverty. We must move beyond the line" (p. 35).

Hasan (2002) reviewed literature on poverty and urban development indicator and acknowledged that, though traditional way of estimating poverty has been criticized, even today it is "still imbedded in this income/consumption paradigm" of poverty measurement (p. 6). The study highlighted the limitation of income poverty estimation as, "estimates based only on the number of people who fall below an income-base poverty line with no account taken of the number suffering from other forms of deprivation (including lack of assets, poor quality, overcrowded and often insecure housing, lack of basic infrastructure and services, lack of civil and political rights...)"

(p. 9). The indicators "not only underestimate poverty but also misrepresent its trends over time. Furthermore, income level poverty line indicators do not identify the capacity of the poor to achieve access (p. 10).

Rohwerder et al. (2016, p. 5) provided a clear, concise and objective report on findings on critical areas of development policy and defined different type of poverty from Absolute poverty to Multidimensional poverty, as well as Amartya Sen capability deprivation of poverty, which was based upon people ability to function in the society. As pointed by The World Bank, the reasons for measuring poverty are it "keeps poor people on the agenda"; identifying poor people in order to target appropriate interventions; monitoring and evaluating projects and policy interventions "geared to poor people"; evaluating the "effectiveness of institutions whose goal is to help poor people". The study suggested "neither income nor expenditure can measure other aspects of well-being. As a result, multidimensional poverty measures have emerged that complement the USD 1.90 a day measure by including other deprivations" (p. 10).

SPECIAL PROJECT ON POVERTY STATISTICS & UNITED NATIONS STATISTICS DIVISION (2005) affirmed poverty "generally viewed in terms of deprivation of some of life's basic needs, such as food, shelter, clothing, basic education, primary health care, and security" and "accurately measuring these indicators is no simple task." The study accepted, income as an important and universal agreed indicator of measuring poverty, even though it is unable to capture all relevant aspects of poverty (p. 14). One reason for focusing on money is practical: inadequate income is clear, measurable, and of immediate concern for individuals. Another reason is that low incomes tend to correlate strongly with other concerns that are important but harder to measure. Lack of money serves as a rough but quantifiable proxy for a host of deprivations." (p. 29).

Manuel Cunjamá (2001) report recognized, poverty as "more than inadequate income or human development—as vulnerability and a lack of voice, power, and representation." The study acknowledged, "multidimensional view of poverty comes greater complexity in poverty reduction strategies, because more factors—such as social and cultural forces— need to be taken into account" (p. 12).

Maity and Assam University (2018) examined multidimensional poverty status and detected the factors which influence multidimensional poverty of Bodo household of Udalguri district, Assam, one of the eight north-eastern states of India. The study was based on primary data of 660 Bodo household covering twenty-two villages of eleven blocks, where Multiple Correspondence Analysis (MCA) method was applied for constructing household level Multidimensional Poverty Index (MPI) as well step-wise logistic regression was used to identify the factors influencing the multidimensional poverty status of the study area. The MPI value for the study area predicts that the area was moderately poor and health and literacy are the most important influencing factors. The study acknowledged, "the traditional poverty traps have been studied either in consumption or in asset space. In recent years, it has been identified by the welfare economists that poverty should be multidimensional" (p. 31).

Oxford Poverty and Human Development Initiative (2016) examined "an MPI cannot be assumed to identify the same persons as poor nor to proxy the level or the trend of income poverty measures." It reported, "the mis-match between non-monetary deprivations and monetary poverty" as well as "mismatch between MPIs and monetary poverty measures. For example, in Chile, 14.4% of people are income poor; 20.4% are MPI poor, but only 5.5% are poor." It was also observed, as per the study of multidimensional poverty in 17 Latin American countries, "a significant proportion of the populations are not income poor yet are multidimensionally poor." The study reported that, "reductions in multidimensional poverty may not match monetary poverty trends nationally or sub nationally. For example, in India the absolute reduction in monetary poverty rates in initially poorer states were faster between 1993-94 and 2004-05; whereas unfortunately the reduction in the MPI poverty rates were slower in initially poorer states during a similar period" (p. 30).

Alkire et al. (2023) addressed multidimensional poverty beyond monetary deprivations. The study acknowledged, "since 2010, the annual global Multidimensional Poverty Index (MPI), was jointly published by the Human Development Report Office (HDRO) of the United Nations Development Programme and the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford, which measures "interlinked deprivations in health, education and standard

of living that directly affect a person's life and wellbeing" and the global MPI as "the only counting base-index which measures overlapping deprivations for more than 100 countries" by providing information of 110 developing countries constituting 6.2 billion people (p.1). The study highlighted the global MPI which "keeps a track on SDG 1—ending poverty in all its forms everywhere as well as measures interconnected deprivations across indicators related to SDGs 1, 2, 3, 4, 6, 7 and 11" (p. 4). The study acknowledged, "all indicators are equally weighted within each dimension. A person's deprivation score is the sum of the weighted deprivations she or he experiences. The global MPI identifies people as multidimensionally poor if their deprivation score is 1/3 or higher (box 3). MPI values are the product of the incidence (H, or the proportion of people who live in multidimension al poverty) and intensity of poverty (A, or the average deprivation score among multidimensionally poor people). The MPI ranges from 0 to 1, and higher values imply higher poverty" (p. 5).

Alkire et al. (2023) acknowledged, "the higher the incidence of poverty, the higher the intensity of poverty that poor people experience." The study reported, 1. Billion out of 6.1 billion people are poor, i.e., about, 18% of the poor people living in acute multidimensional poverty. 485 million poor people are in severe poverty and "experiencing 50-100% of weighted deprivation" and 10 million of the 12 million poor people live in Sub-Saharan Africa. Among the groups, rural areas are poorer than urban areas, as 84% of the poor people live in rural areas and half of the 1.1 billion poor people are children under the age of 18 years (p. 1). It is also reported that, in all regions except Europe and Central Asia, around half of poor people do not have a single member of their household who has completed six years of schooling, 600 million poor people live with a person who is undernourished in their household and 824–991 million out of the 1.1 billion poor people do not have adequate sanitation, housing or cooking fuel. Out of 61 countries, in 42 countries more people live in multidimensional poverty, based on the global MPI, than in extreme monetary poverty, based on the World Bank's $2.15 a day measure (p. 3).

Alkire et al. (2023) stated "multidimensional metrics complement monetary poverty metrics by measuring nonmonetary deprivations" (p. 13). The study acknowledged, "understanding where poor people live is crucial for policymaking" (p. 6). In India, it

was reported that, 415 million poor people moved out of poverty from 2005/2006 to 2019/2021 and Incidence fell from 55.1 percent to 16.4 percent as well as deprivation in all indicators declined. The poorest states and groups, including children and people in disadvantaged caste groups, had the fastest absolute progress" (p. 16). The study examined breaking down by component indicator showed, "what deprivations poor people experience, which can guide the choice of poverty reduction interventions to achieve the greatest impact, and by using these data on MPI values; the proportion of poor people, the intensity of their poverty, the number of poor people and indicator composition, many actors can concentrate on the multiple deprivations that batter poor people's lives—and reduce acute multidimensional poverty" (p.16).

Dehury and Mohanty (2015) performed dominance analysis to check the robustness of the estimation of multidimensional poverty across deprivation cut-off (k) (p. 12). It was observed, "during the first four decades of development studies (1950-90), poverty was primarily measured in money metric form, either from household income or consumption expenditure" (p. 3), where, "the limitation of money metric measure led to the measuring poverty in a multidimensional space. Though eradication of multidimensional poverty has been at the centre stage of development agenda, there are only a few studies that estimated multidimensional poverty in India" (p. 5). The study acknowledged In India, "there are a limited number of studies that estimated multidimensional poverty. Earlier studies in India were based on National Family and Health Surveys (NFHSs) limited to state level analyses and did not incorporate any direct economic variable" (p. 14). The study basing on these findings, suggested; "attempts be made to provide estimates at the district level, as the district is the centre of planning and programme implementation in India" and also suggested "targeted intervention in backward regions to reduce poverty and inequality, and achieve the Millennium Development Goals in India" (p. 15).

Gweshengwe (2019) confirmed "although there is no perfect poverty measure, an effective one should be least imperfect" i.e., "one which sufficiently acknowledges that poverty is, by nature, multidimensional, complex, experiential and individual- or context-specific" and analyzed "the degree of imperfection of the extensively and commonly used poverty measures" i.e., the Income Poverty Line (IPL) originally

developed by Charles Booth based on minimum income level and Global Multidimensional Poverty Index (Global MPI) based on three human development dimensions: education, health and standard of living, which has ten weighted indicators. The study revealed, "the IPL and Global MPI do not sufficiently acknowledge/capture the multidimensionality of poverty" as the IPL "measures poverty exclusively in the domain of income; hence, it does not capture non-monetary poverty dimensions" whereas, the Global MPI "omits a large number of poverty dimension". The study also acknowledged at present, "world governments and their development partners are working towards eliminating" poverty in all its forms by 2030, because of which "measuring poverty is very crucial as it identifies who the poor are, how many are they, where do they resides and what kind of deprivations are they facing. Thus, becoming crucial for "the need for least imperfect poverty measures" (p. 37, 38, 40).

Mohanty (2010) conceptualized "with the following rationale; First, though multidimensional poverty has been acknowledged cutting across disciplines (among economists, development thinker, social scientists, public health professionals, policy makers and international organizations) and included in the development agenda, its measurement and application are still limited. Second, poverty eradication program in India identifies poor using the concept of multidimensional poverty but the official estimates of poverty continue to be derived from consumption expenditure data" (p. 5). The study acknowledged, "though there are concerted efforts to alleviate multidimensional poverty through various developmental schemes like the National Rural Health Mission (NRHM), the National Rural Employment Guarantee Scheme (NREGS), Sarva Siksha Abhiyan (SSA)". The study also acknowledged, "the official estimates of poverty in India are still confined to money-metric poverty, derived from consumption expenditure data" (pp. 32-33) as the then Planning Commission had already recognized the multidimensional nature of poverty. The study suggested, "more research to be undertaken so as to arrive at more precise estimates of poverty" and "in using multidimensional poverty as one of the criteria in the transfer of fiscal resources from the centre to the state" (p. 36).

Zeumo et al. (2011) declared “fighting against poverty involves measuring it and analysing the underlying causes, in order to propose appropriate policies”. The study acknowledged, “there is no definition of poverty winning unanimous support” (p. 7), and, “the failure to eradicate poverty. The problem being methodological, political will, and social will as well as one more methodological problem in fighting poverty and in designing adequate poverty reduction policies, as most of the actual poverty reduction policies are based on simplistic characterizations of who is poor which is misleading. Poverty is multidimensional as it includes several factors such as poor health, lack of education, inadequate living standard, lack of income, lack of representation and freedom, powerlessness, poor quality of work and threat from violence”. Thus, measurement of poverty, firstly needs to “accept its multidimensional nature”, secondly, “develop a multidimensional poverty measurement to support policy making processes: it has to provide the more policy-relevant information available. A poverty reduction policy is not just efforts to increase the income of the population. Poverty measurement must be an instrument for multi-dimensional policy making and policy implementation, and to assess the effectiveness of current policies and to determine whether the situation is changing (pp. 33-34). Poverty measurement is not only performed in order to assign numbers to individuals or households, but it has to help decision makers making well informed decisions about policies, programmes and projects (p. 36). Measuring poverty is more than identifying the people living beyond the poverty threshold ($ 1.25 a day) or averaging some indexes in order to get a single composite one. The problem is not just to know if somebody is poor, but to know what we can do in order to allow him not to be poor in the future” (p. 37).

Alkire et al. (2010) developed for the 20th Anniversary edition of the UNDP’s flagship HDR a new international measure of poverty by OPHI, which goes beyond the traditional measure of income in reflecting multiple deprivations battering a poor person in dimension education, health and standard of living. The study acknowledged, the use of MPI as an analytical tool in identifying “the most vulnerable people”, by showing where they are deprived and revealing the interconnections among the deprivations which “enable policy makers to target resources and design policies more effectively.” The study also acknowledged, Multidimensional Poverty Index (MPI)

"directly measures the combination of deprivations that each household experiences" (p. 1). The study analyzed MPI measures of "providing information" helpful for informing "better policies to reduce acute poverty".

Alkire et al. (2010) revealed the MPI has three dimensions: health, education, and standard of living, measured using 10 indicators where, each dimension is equally weighted; each indicator within a dimension is also equally-weighted. It also "reveals the combination of deprivations that batter a household at the same time. The study acknowledged, "a household is identified as multidimensionally poor if and only if it is deprived in some combination of indicators whose weighted sum exceeds 30% of all deprivations." The MPI is the product of two numbers: the Headcount H or percentage of people who are poor, and the average intensity of deprivation A – which reflects the proportion of dimensions in which households are, on average, deprived. The study also acknowledged that, "the MPI goes beyond the HPI and other poverty measures to capture how different groups of people experience concurrent deprivations" (pp. 1-2).

Alkire et al. (2019) acknowledged that MPI can be "broken down by indicator to highlight which deprivations characterize poverty" which are "vital for policymakers." It was observed that, 1.3 billion people (23.1 %) were multidimensionally poor and half of the 1.3 billion (663 million) multidimensionally poor people were children under the age of 18 and 428 million (32.3%) were under the age of 10, deprived in "every one of the MPI indicators" (p. 6). The study observed that, "there is little or no association between economic inequality (measured using the Gini coefficient) and the MPI value" (p. 2). It was also observed that, "any reduction in intensity reduces MPI (even if incidence remains unchanged)" which is an indication of progress that people were moving out of poverty. The study also acknowledged that, "in the poorest countries not only higher incidence, but also higher intensity of multidimensional poverty, were displayed "with each poor person deprived in more indicators" where, "some countries have similar incidences but very different intensities". The study observed that, the incidence of multidimensional poverty in Pakistan and Myanmar was 38.3 %, but the intensity was considerably higher in Pakistan (51.7 %) than in Myanmar (45.9 %) (p. 5).

Alkire et al. (2019) observed that, about 22.7 % of children under the age of 5 was found living in household where at least one child was malnourished. “Education deprivations continue to affect South Asia”, where 36.7 million children were found not attending school through grade 8, out of 436 million children, one in four were found living in a household where no adult have completed six years of schooling, about 31.5% of pioneer children in Afghanistan were living with at least one other child age 10–17 who have not completed six years of schooling and has already left school and about some 28.4 percent of pioneer children live in a multidimensionally poor household, which means they experience other deprivations that may affect their capacity to learn (pp. 7-8).

“MEASURING ACUTE POVERTY IN THE DEVELOPING WORLD: ROBUSTNESS AND SCOPE OF THE MULTIDIMENSIONAL POVERTY INDEX” (2014) examined the difference between the MPI and the dollar-a-day. The study highlighted that, “MPI is about the direct method i.e., MPI identifies those who actually fail to meet the accepted conventions of minimum needs or functioning’s” whereas $1.25/day is based on the indirect method i.e., “identifies those who do not have the income usually required to meet certain needs”. Thus, the MPI “complement income poverty analyses in the developing world, by bringing information from a different angle, focused directly on actual deprivations” (p. 4).

Diaz-Bonilla et al. (2023) examined the World Bank’s Poverty and Shared Prosperity 2022, and estimated “nearly 40 percent of multidimensionally poor individuals are not captured by monetary poverty alone. Understanding the non-monetary deprivations faced by the poor highlights the importance of improving other aspects of human welfare that are not adequately measured by monetary indicators” (p. 2).

NITI Aayog et al. (2023) reviewed the progress of MPI in India, examining MPI to be “an important tool for enabling the country to track its progress towards the Sustainable Development Goals (SDGs), particularly SDG target 1.2”, aiming for the reduction of poverty in all its dimensions. The study, using the National Family Health Survey (NFHS), reported India’s 2019-21 MPI results along with the progress in multidimensional poverty reduction between 2015-16 and 2019-21. Dr. Sabina Alkire,

Director of OPHI remarked that, "as a policy tool, the MPI data can be utilized by actors at national, state and district levels to accelerate multidimensional poverty reduction" (p. viii).

NITI Aayog et al. (2023) reported, according to NFHS-5 (2019-21) in Nagaland; 15.43% of the total population are multidimensionally poor (headcount ratio), intensity of poverty was 42.61% and MPI value 0.066, whereas, in NFHS- 4 (2015-16) about 25.16% total population of India who were multidimensionally poor. It was reported that, deprivation in each indicator 2019-21 for health dimension; 10.78% of the multidimensional poor population were deprived in nutrition, 0.74% in child adolescent and mortality, in terms of Education; in years of schooling, 5.90% of the population were deprived and school attendance, 2.60% of the population were deprived, and for standard of living dimension; drinking water; 0.71%, electricity; 0.71%, sanitation; 3.36%, housing; 14.46% and assets; 10% of the population were deprived, respectively. The study also reported that, for Nagaland Rural; 19.88% were multidimensionally poor with intensity of poverty as 42.67% and MPI value 0.085, for urban; 6.14% were multidimensionally poor, with intensity of poverty; 42.20% and MPI score 0.026. It also reported that, the percentage of people who are multidimensionally poor in Peren district as 17.46% with intensity of poverty to be 44.55% and MPI score as 0.078 and Kohima multidimensional poor were 6.50% with intensity of poverty was 38.21% and MPI score 0.025.

Aderinto et al. (2024) presented MPI data from 112 countries covering 1,359 subnational regions and reported, 1.1 billion out of 6.3 billion people were living in acute multidimensional poverty, and over half of them were children. The common deprivations the poor people were facing were lack of adequate housing, sanitation, electricity, cooking fuel, nutrition and school attendance. The report stated that, the poorest are the children under the age of 18 as over half of the 1.1 billion poor people are children, and globally, 27.9 percent of children live in poverty, as compared with 13.5 % of adults. It is also reported that, 83.7 percent of poor people live in rural areas. Overall, 28.0 percent of the global rural population are poor, compared with 6.6 percent of the urban population. The study reported 83.2 % of the world's 1.1 billion multi dimensionally poor people live in Sub- Saharan Africa and South Asia, and about two-

thirds of poor people live in middle income countries" (749 million, 65.2 percent) (p. 1). The study also reported that, "the poor people experience deprivation, in sanitation i.e., about 1.1 billion/ 828 million people, 886 million people in housing, 998 million in cooking fuel, and over half of the 1.1 billion poor people live with a person who were undernourished in their household (i.e., 637 million) (pp. 1-2). The study suggested that "to end poverty in all its forms, the interlinked deprivations of poor people need to be addressed to reduce the intensity of poverty and empower poor people to exit poverty" and reminding that, "people living in multidimensional poverty ordinarily experience multiple deprivations simultaneously" (p. 8).

Santos and Alkire (2015) categorized MPI measures, which was "calculated at the country level using globally comparable data and Regional or national MPIs using the Alkire-Foster method" (p. 1). The study acknowledged that, "poverty has traditionally been measured in one dimension, usually income or consumption. Income poverty certainly provides very useful information. Yet poor people themselves define their poverty much more broadly to include lack of education, health, housing, empowerment, employment, personal security and more." The study also acknowledged that, the MPI is a combination of "two key pieces of information to measure acute poverty: the incidence of poverty, or the proportion of people (within a given population) who experience multiple deprivations, and the intensity of their deprivation - the average proportion of (weighted) deprivations they experience" (p. 3)."Acute deprivation, allows comparisons across countries or regions of the world, as well as within-country comparisons between regions, ethnic groups, rural and urban areas, and other key household and community characteristics" which, "furthermore, enables analysis of patterns of poverty i.e., how much each indicator and each dimension contributes to overall poverty" (p. 4).

Santos and Alkire (2015) examined the MPI based on the Alkire-Foster (AF) methodology developed by Sabina Alkire and James Foster which "assesses the simultaneous or joint deprivations poor people or households experience", within a set of indicators, and stated that, "income is not always a good guide to whether people have access to what they find valuable and necessary in life." It can be expected that "income poverty is a sufficiently good proxy for other deprivations such as

malnutrition, low education, and poor housing conditions" but "some important needs are not satisfied in the market, or markets function very imperfectly." For example, "access to clean water and education" are "sometimes provided by the state" where, "a family may enjoy the minimum income and yet still not satisfy some basic needs. On the other hand, in certain areas with a very strong presence of the state or NGOs, households who do not reach the minimum income level may access goods and services. Second, each household has a different capacity to convert income into satisfaction of needs. Third, income is merely a means to ends. It is the ends which are valuable, not the means. We are interested in whether a person has certain cognitive skills, not whether she has the income to attend school. We are interested in whether a person is well nourished, not whether she has the income to be so. And fourth, income poverty is unidimensional: if we know a person is income poor, that is all we know about them. Whereas if we know they are multidimensionally poor, we can then (with the AF method) take the next step and see how they are poor – look at the deprivations they experience at the same time. This gives direct and important information for poverty reduction" (pp. 30-31).

Santos and Alkire (2015) highlighted the differences between MPI and income poverty. "The first difference is that it moves from the unidimensional space of income (or consumption) to a multidimensional space. Someone is poor if she is deprived in income alone, but with the MPI someone is poor if she is deprived in several indicators at the same time. The second difference is that the MPI moves from means towards ends" which "does so imperfectly due to a lack of proper data" and mentioned that MPI examined "whether there is someone undernourished in the household and whether someone has died" which "both are clear functioning (ends rather than means to ends)" (p. 31).

Walker (2015) affirmed "people generally recognize poverty instantly when they encounter it", but "often find difficulty in saying precisely what it is" (p. 1). It is now widely agreed that, "poverty is more than just the lack of income" as it included simultaneous multiple deprivations experienced by the poor people (p. 2)

National Multidimensional Poverty Index Baseline Report Based on NFHS-4 (2015-16) (2021) reported 24.85% of total population of India are multidimensionally poor and deprived in each indicator; 19.90% of the population are deprived in nutrition, 1.88% in child adolescent and mortality, 10.71% in years of schooling, 5.23% in school attendance, 23.13% in cooking fuel, 21.32% in sanitation, 5.53% in drinking water, 8.29% in electricity, 20.56% in housing and 8.87% in assets. The study also reported that, 32.59% are multidimensional poor in Rural areas which is higher in percentage as compared to 8.65% in Urban areas.

Sabina Alkire and James Foster (2008) proposed a new methodology for multidimensional poverty measurement using Foster-Greer-Thorbecke measures adjusted for multidimensionality, and reported that, Multidimensional poverty have "captured the attention of researchers and policymakers alike due, to the compelling conceptual writings of Amartya Sen." The study mentioned "aggregation and identification" as the two steps for poverty measurement, and highlighted that, the two approaches in identification of the poor in a multidimensional setting i.e., the "union approach, where someone deprived in a single dimension as poor in the multidimensional sense and intersection approach which requires a person to be deprived in all dimensions before being identified as poor." The study introduced "an intuitive approach" in identifying the poor by using two forms of cutoffs, where the first cut-off is the "traditional dimension-specific poverty line or cutoff, which identifies whether a person is deprived with respect to that dimension" and the second demarcates "how widely deprived a person must be in order to be considered poor" where the yardstick used a counting methodology, where "the second cutoff is a minimum number of dimensions of deprivation" (p. 2).

Nguyen et al. (2023) identified the multidimensional poverty status and determinants of poverty among ethnic farmers in Thua Thien Hue province, Central Vietnam, based on a survey of 283 respondents. Using Alkire–Foster method to measure multidimensional poverty, and a binary logistic regression model was applied to identify the determinants of multidimensional poverty among farmers. The results showed that about 33.57% of households are in multidimensional poverty and the deprivation in the six poverty dimensions was inconsistent, with income at 68.23%,

education and health at 9.69%, housing at 7.19%, information access at 3.65%, and living conditions at 1.56% (p. 1). The study examined "the headcount ratio of multidimensional poverty of ethnic minorities in the study was high, and the deprivation of income indicator contributed the largest to the poverty rate. Nine factors affected the multidimensional poverty of ethnic minority households in the study area, namely the age of household head, family size, number of shocks, household labor, farm size, TLUs, customers, traded input value, and participation in training programs" and for the "reduction of multidimensional poverty for ethnic communities, the study recommended the following: First, farmers should diversify livelihood activities for themselves, including non-agricultural and agricultural households, increasing the number of livestock and improving the quality of agricultural land", second, it was "necessary to improve the infrastructure system to have closer access to central markets, main roads, and intervillage and intercommunal transportation systems" and thirdly, "agricultural mechanization and farmers collaboration should be promoted to reduce transaction costs while providing better market access. Finally, related departments, particularly the agricultural extension system at district and provincial levels, should help farmers increase access to credit organizations and participate in training programs to improve the capacity of farmers to cope with shocks" (pp. 13-14).

Ferreira and Lugo (2013) acknowledged income poverty as "an inability to consume certain basic commodities, however, income poverty is typically associated with deprivation in other realms, such as health, education, social status, and political power, which are more difficult to price" (p. 232).

Ezzrari et al. (2012) explored Multiple Correspondence Analysis approach, to assess multidimensional poverty in Morocco between 2001 and 2007. The study examined, "monetary and non-monetary indicators" were positively and significantly correlated but it was "suggested that multidimensional and monetary poverty do not describe the same phenomenon" and, in 2007, poverty was found to be higher in rural areas as compared to urban areas and according to all FGT poverty indicators. The study observed that, "the decline in poverty between 2001 and 2007 have not been limited to improvements in monetary indicators but has concerned multiple aspects of living conditions including health, education and labor market conditions" and, "the decline

in multidimensional poverty appeared to have been more pronounced than the decline for monetary poverty. The multidimensional approach also confirms that the decline in poverty has been stronger in rural as opposed to urban areas. Robustness tests including stochastic dominance tests validate both the monetary and the multidimensional findings. Multidimensional inequality shows invariably less inequality than the monetary counterpart, in both urban and rural areas, which may be explained by the fact that larger families tend to be more monetary poor in per capita terms but also tend to own a larger number of assets on a household basis" (pp. 18-19).

Martin Ravallion et al. (n.d.) highlighted "the relationship between poverty and education in raising economic growth and reducing poverty. The better educated have higher incomes and thus are much less likely to be poor. With higher levels of education, the likelihood of being poor falls considerably. Raising education attainment is clearly a high priority in order to improve living standards and reduce" (p. 8). The study examined and acknowledged "counting the poor is very important to help policymakers to design programs and policies to fight poverty" (p. 8) and that "once poverty is measured and the poor are identified, the next steps is to choose public actions and programs that have the greatest impact on poverty, and identify indicators of progress, and monitor change in a systematic manner". The study acknowledged that, "poverty measurement and diagnostics are therefore central to informing policy making for poverty reduction in many countries" (p. 9).

RANGARAJAN and Government of India Planning Commission (2014b) reviewed the methodology of measurement of poverty by the Planning Commission based on the recommendations made by Working Group/Task Force/Expert Groups consisting of eminent experts in the field, and revisiting the methodological issues related to the measurement of poverty to make the estimates more relevant to the contemporary economic situation" regarding "whether the poverty line should be fixed solely in terms of a consumption basket or whether other criteria are also relevant, and whether the two can be effectively combined to evolve a basis for estimation of poverty in rural and urban areas, and to examine the issue of divergence between consumption estimates based on the NSSO methodology and those emerging from the National

accounts aggregates and to suggest a methodology for updating consumption poverty lines" (p. 6).

Fujii (2016) reviewed the growing body of literature on vulnerability to poverty by classifying them into welfarist, expected poverty, and axiomatic approaches. The study affirmed that, "the developing world has witnessed a massive reduction in extreme poverty since the end of the Second World War. The fight against poverty has been particularly successful in East and Southeast Asia. Yet, the threat of poverty has not yet become a thing of the past".

Pal et al. (2005, pp. 4–7) examined the measurement of poverty, "where the first attempt of measuring absolute poverty was made by the working group consisting of eminent economists and other scientists in the social sciences, set up by the planning commission in 1962, the poverty line was set up at ₹ 20 per capita total expenditure (PCTE) per month at 1960-61 prices, calculated on the basis of the minimum normative food basket". But in 1971, was criticized by Dandekar and Rath as "there was no distinction made between rural and urban, which led to recalculation of the poverty lines on the basis of calorie requirements, where ₹170 per capita per annum for rural households and ₹ 271 per capita per annum for urban households, which is about ₹15 per capita per month for rural households and ₹ 22.5 per capita per month for urban households at 1960-61 prices." They were of the opinion that, "the poverty line should vary over regions mainly because of the variations of the tastes and preferences and the price structures over the regions" as the expert committee in 1962, "did not consider any regional variations in the estimate of the poverty line". The Task Force in 1979, recommended poverty lines separately for rural and urban areas at national level, where it was set at ₹49.09 for rural areas and ₹56.64 for urban areas at 1973-74 prices, based on minimum calorie requirement of 2400 and 2100 Kcal in rural and urban areas respectively. The entire study was done basing on NSS data (61 round), and from the findings it was observed that, "it is necessary to take different sets of consumption baskets and hence different calorie norms for different states, there may be under -reporting of consumptions, consideration of population structure while calculating state wise poverty rates" (p. 88).

Satapathy and Jaiswal (2018, p. 86) acknowledged “after 70 years of independence, today India is the fastest growing economy of the world”, which was evident from the fact that, “India’s GDP has reached $2.65 trillion in 2017 from a mere $93.7 billion in 1950. But amidst all these developments, the state of poverty in India has always remained a matter of concern and a major problem in the country, the reason being India’s lopsided development.” The study affirmed “the country has definitely shown growth in poverty alleviation rate, but the growth is not what it should have been after so many years of independence with so many policies and programmes being in existence to serve this purpose” and pointed out that, “India lacks uniform methodology of estimating poverty which adds to the misery. However, Government’s efforts towards poverty alleviation through financial inclusion programmes” was a “clear indication that India wants to increase the standard of living and quality of life for one and all, and not only for the privileged few” (p. 92). The study suggested “innovative poverty alleviation programmes and effective implementation of existing programmes are the needs of the hour” and mentioned that, the “challenges are enormous” which is “difficult but not impossible to overcome these challenges” and implied that “all we need at this hour is wholehearted efforts and commitment to achieve economic growth in which the people from under-privileged sections will be having equal share” and “the country should be vouching for a better standard of living and an all-inclusive society for one and all” (p. 92).

United Nations Development Programme (2016) presented in 1997 HDR, the first multidimensional poverty measure by the UNDP: the Human Poverty Index (HPI)”, which was completely different from income poverty (p. 2) and “the most comprehensive measures of poverty- the Multidimensional Poverty Index, developed in collaboration with the Oxford Poverty and Human Development Initiative (OPHI), published for the first time in the twentieth anniversary edition of the HDR in 2010” (p. 3).

United Nations Development Programme (2016) acknowledged that, the “UNDP has been exploring the dynamic aspects of income poverty. While often it is assumed that people are poor generation after generation, captured in poverty traps and that people are thrown into poverty as a result of economic volatility or other shocks that hurt their

livelihood. A multidimensional understanding of poverty has always been relevant – but it is now essential for the 2030 Agenda for Sustainable Development". The study also mentioned that, "UNDP's stands ready to support governments and other stakeholders with analysis, advocacy, and programmes to ensure that the concept and measurement of poverty are fit-for-purpose in the context of the 2030 Agenda" (p. 4).

Mowafi (2000) pointed out Deaton view regarding "the PPP/Bank approach to defining an international poverty line," being "simple, easy to remember, and applies to all countries" (p. 5). The study acknowledged that, though income/consumption measures "continue to serve as an important tool for the evaluation of global poverty, it has been widely recognized that income-generation programs are not sufficient for poverty alleviation" (p. 11). It is been mentioned that, "the poor overwhelming described their situation as multidimensional, including material, non-material and psychological aspects ranging from income to land to limited access to services, social exclusion, isolation, powerlessness and dependency" (p. 48).

Ravallion and The World Bank (1998, p. 30) critically overviewed alternative approaches to setting poverty lines, and reviewed the methods found in practice, throwing light and toward resolving, ongoing debates about poverty measurement, emphasizing those issues which would appear to have greatest bearing on policy discussions. The study mentioned that, "Poverty measurement go beyond attempts to approximate a well-defined theoretical ideal supplied by economic theory" and "drawing poverty lines can be interpreted as ways of expanding the information" where "objective methods often draw on information from outside economics on the commodities needed for maintaining normative activity levels appropriate to participation in society; focusing on capabilities" whereas, "subjective methods extend the information base in another direction, namely by drawing on self-reported perceptions of welfare adequacy".

Fusco et al. (2003, p. 27) explained the potential contribution of multidimensional analysis in terms of definition and measurement of poverty and defined a broader framework of policy and acknowledged that, "Poverty is truly a multidimensional phenomenon and so requires multidimensional policy and program interventions"

where “multidimensional indices can provide us with information for implementing socioeconomics policies that could be efficient in the long term” whereby “transfer policies would help to alleviate poverty in the short term whereas socio-economics policies should aim at reducing poverty in the medium long term”.

Dimri et al. (2017) studied absolute income poverty measurement and stated “measuring poverty is a key component of the evaluation of policies aiming at improving the well-being of the worse off in society” (p. 2).

Deaton and Research Program in Development Studies, Princeton University (2003) acknowledged, “in recent years, Amartya Sen has been an important voice urging that poverty needs to be seen more broadly than inadequacy of income” and argued that poverty “is the absence of one or more of the basic capabilities that are needed to achieve minimal functioning in the society in which one lives” which “includes not having enough income to ensure being adequately fed, clothed, or sheltered (income poverty) or being unhealthy (health poverty) as well as being denied access to education, political participation, or a full role in society” (pp. 11-12). The study stated; “if we confine ourselves to income-based measures, we risk missing important features of poverty. For example, a government that raises taxes to pay for better public services, or better public health, may increase income poverty, while reducing poverty more broadly” (p. 12) and “the fact that income tends to be positively correlated with other aspects of wellbeing also alerts us to the fact that poor people in the world are poorer, and rich people richer than we would recognize on the basis of their incomes alone” (p. 13).

Gaur et al. (2020, p. 19) acknowledged about “two critical issues in the discourse on poverty in India.” One, related to “poverty measurement” and “second related to effective poverty elimination. Yet any poverty measure is itself imperfect. Imperfections stem primarily from two factors: data limitations and the diversity of human lives being assessed more so in a vast country likes India. In India, poverty measurement has repeatedly led to contentious debates on poverty line”. The study also acknowledged that, “poverty is now not just about basic food to keep body and soul together but about living standards -sanitation, housing, piped water, electricity,

education, health, and jobs. Poverty line assessment if it were to be done presently cannot be based on minimum expenditure on subsistence basket as done in the past. The World Bank has classified India as a lower middle-income country and the corresponding poverty line would be PPP $3.2 (2011 prices), which translated into roughly a consumption level of Rs 75 per person per day. Over time, India will need to adjust to the new reality of the transition to a lower middle- income country, in which poverty does not mean living at the edge of hunger but, rather, lack of income to take advantage of the opportunities thrown up by a growing economy.

Gaur et al. (2020) highlighted "crossing a minimum income or consumption threshold does not imply that the lack of education or health will not force households back into poverty. Evidence shows that India is successfully addressing multidimensional poverty through diverse range of interventions. Ministry of Rural Development's programmes focusing both on alleviating the poverty of households through MNREGA, NRLM, PMAY, DDUGKY, and the poverty of regions through PMGSY, SPRM, SAGY are on right track (p. 20). At global level also, India's success in addressing multidimensional poverty is critical for the realization of the ambitious sustainable development goals (SDGs) that aim to leave no one behind. The study also suggested that, "the more complete picture provided by the MPI would help monitor the effectiveness of poverty reduction efforts, to understand which components of multidimensional poverty are improving, and which are not" (p. 21).

Mothkoor et al. (2021, p.1) measured multidimensional poverty of India employing National Sample Survey Organization data from 2014–15 to 2017–18, using income, health, education, and standard of living as the dimension for the measurement. It was reported that, the MPI headcount declined from 26.9% to 13.75 % over the study period, where it was observed that, "income as the main indicator with the highest contribution to the MPI, followed by insurance, the decline in deprivation was "steeper" in rural areas than urban areas". The study acknowledged "poverty manifests itself in multiple ways and hence needs to be measured by a composite index that looks at multiple dimensions" where "the root cause of these multiple deprivations could be shortfalls in income, but sometimes income may not be translated into meeting basic needs (Sen 1980)". The study affirmed poverty to be "associated with deprivation in

other areas, such as health, education, and other social characteristics", which needs a 'multidimensional approach which is more practical and insightful for measuring poverty" (p.1) and as "income continues to be the driving factor contributing to MPI", it was suggested that, "Government efforts therefore should be focused on creation of more high-paying jobs that leave more income in the hands of individuals.

Lalita Kumari (2021, pp. 2-11) remarked "poverty is widespread in India, with the nation estimated to have a third of the world's poor" and according to the criterion of household consumer expenditure used by the Planning Commission of India, 27.5 percent of the population was living below the poverty line in 2004–2005, down from 51.3 percent in 1977–1978, and 36% in 1993-1994" (mentioned in Economic Survey 2009-10). The study highlighted that, "Poverty give birth too many other problems" and "the link between ignorance and poverty and ill health and poverty are well-established. Poverty therefore is a complex phenomenon of many dimensions not merely the economic dimension". The study suggested that, "government should provide better medical facilities, drinking water facilities and education so that people living below poverty line can improve their lives".

1.5. Research Gap

Although extensive literature exists on poverty estimation, it predominantly focuses on a one-dimensional approach based on income or consumption data. While the concept of multidimensional poverty has gained recognition, studies have largely continued to rely on traditional methods. Specifically in the context of the state Nagaland, there is a noticeable lack of empirical research that captures the multiple dimensions of poverty such as education, health, and standard of living. This gap limits a comprehensive understanding of poverty in the state. Therefore, this study seeks to fill this void by examining multidimensional poverty in Nagaland, thereby contributing valuable insights to academic research and informing policy decisions.

1.6. Statement of the problem:

Though there are vast literatures on poverty and in the way, poverty is estimated. It has been on poverty line which is usually measured based either on income or consumption, generally a uni or single dimensional measures neglecting other

dimensions of deprivations, by considering a certain minimum income or consumption level to be identified as poor. Poverty is more than just lack of income or consumption such as, the lack of proper education, living, sanitation, safe drinking water and the likes. Thus, income as an indicator is not a good proxy for reflecting other dimensions of deprivations. Poverty is multidimensional which is clearly substantiated by the Sustainable Development Goals. In order to alleviate/ fight poverty, measuring poverty accurately is a prerequisite as poverty line no matter how well conceived and intentioned can never serve the purpose of measuring well-being precisely. MPI is a complement to the income approach, which is composed of three dimensions that directly measures the deprivations poor people are entangled. It can be used as a useful tool to track the poor, the SDGs goals and designs policies according to the need of the people.

1.7. Objectives of the study:

1. To examine the Deprivation level in terms of Education, Health and Standard of Living.
2. To assess Poverty through Multidimensional Poverty Index (MPI).
3. To compare Multidimensional Poverty between the districts and rural-urban areas.

1.8. Hypothesis:

The following hypothesis were tested in the study:

1. There is a significant difference in Multidimensional Poverty between the Districts and Rural-Urban areas.
2. Lower income group are vulnerable to deprivations.

1.9. Area and period of study

For the study two districts were undertaken, out of the 17 administrative districts in the state Nagaland. The area of study was Kohima and Peren districts, for the period 2019-2020.

1.10. Methodology

1.10.1. Data sources:

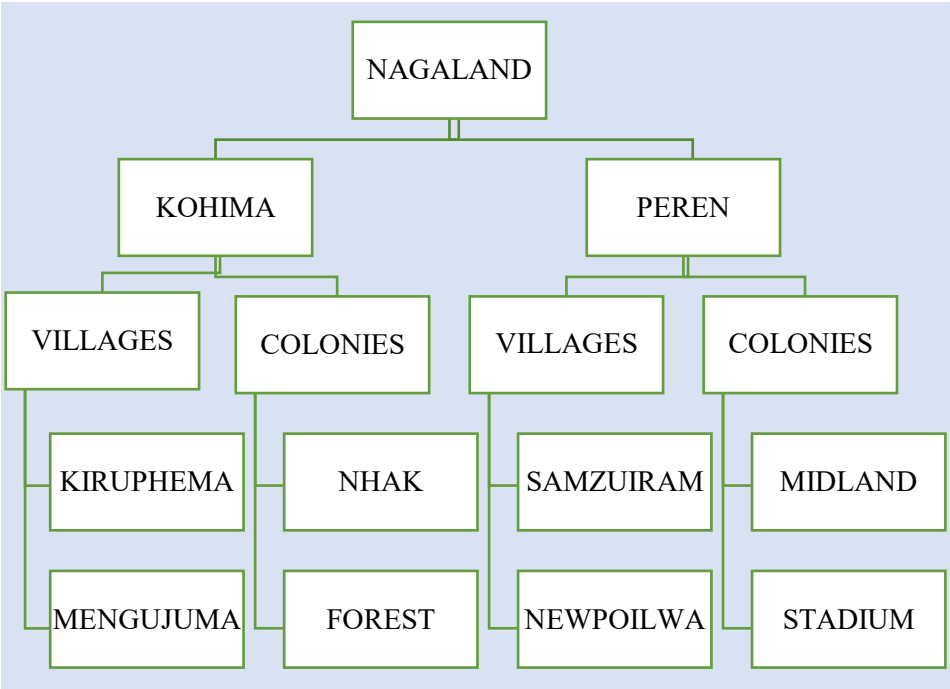
The study was based both on primary and secondary source of data. The Primary data was collected through questionnaires and personal interview schedules from the respondents from the sample households of Kohima and Peren districts. Secondary data was collected from various sources viz: Journals, Articles and Book, NSS 76 Round data, NFHS-5, Nagaland Statistical Handbook, Nagaland Economic Survey, published and unpublished documents.

1.10.2. Sample Design and sample size:

A stratified random sampling was used for the collection of the data.

i. **Sample Design of the District**: Sample design of the districts is presented in Figure no.1.2. Two districts- Kohima and Peren were selected as a sample for the study. From the two districts: 2 villages each and 2 colonies from the urban areas were selected. Further, from the sample villages and colonies; 20% of the sample (household) size were taken up for study.

Fig no.1.2. Sample design of the district



Source: Field Survey 2019-20

ii. **Sample Design of the respondents:** The sample distribution for the study is presented in Table no.1.6. The 4 sample villages are 1. Kiruphema village; a total of 120 households, 2. Mengujuma village; a total of 120 households, 3. Samzuiram village; a total of 990 households, and 4. New Poilwa village; a total of 125 households. The sample size of 20% were selected from each village for the study, thereby from 1. Kiruphema village-24 households with sample population of 140 were selected, 2. Mengujuma village- 24 households with sample population of 110 were selected, 3. Samzuiram village-198 households with sample population of 1167 were selected and 4. New Poilwa village-25 households with sample population of 152 were selected respectively for the study.

The 4 sample colonies are 1. NHAK colony; a total of 400 households, 2. Forest colony; a total of 250 households, 3. Midland colony; a total of 350 households and 4. Stadium colony; a total of 180 households. The sample size of 20% were selected from each colony, thereby from 1. NHAK colony -80 households with sample population of 329 were selected, 2. Forest colony- 50 households with sample population of 157 were selected, 3. Midland colony-70 households with sample population of 383 were selected and 4. Stadium colony- 36 households with sample population of 215 were selected, respectively for the study.

From the four villages selected for the study of Rural in Nagaland, which accounted to a total of 1,355 households. The sample size of 20% (271 households) with sample population of 1,569 were collected. The four colonies selected for the study of Urban in Nagaland, which accounted to a total of 1,180 households. The sample size of 20% (236 households) with sample population of 1184 were collected.

From Kohima district; total households accounted to 890, and the sample size of 20% (178 households) with sample population size of 836 and for Peren district; total households accounted to 1645, and sample size of 20% (329 households) with sample population size of 1917 were collected. The two districts for the study represented Nagaland. Total households

numbering to 2,525. The sample size of 20% (507 households) with sample population size of 2,753 were collected.

Table no.1.3: The sample distribution for the study

Area		Total Households	20% Sample Households	Sample Population
Villages	Kiruphema	120	24	140
	Mengujuma	120	24	110
	Samzuiram	990	198	1167
	New Poilwa	125	25	152
Rural		1,355	271	1,569
Colonies	NHAK	400	80	329
	Forest	250	50	257
	Midland	350	70	383
	Stadium	180	36	215
Urban		1.180	236	1,184
District	Kohima	890	178	836
	Peren	1,645	329	1917
State	Nagaland	2,535	507	2,753

Source: Field Survey 2019-20

1.10.3. Data analysis

Multidimensional poverty index was analyzed and constructed using Alkire and Foster Methodology developed by Sabina Alkire and James Foster. A summary of the dimensions, indicators and their association with the SDGs, thresholds and weights used in computation of MPI for the study is presented in Table no.1.7. Each dimension was equally weighted and each indicator within a dimension was also equally weighted. Each of the two indicators of education dimension has a weight of 0.167 (1/6), each of the two indicators of health dimension has a weight of 0.167 (1/6), and each six of the indicators of the standard of living dimension has a weight of 0.056 (1/18). A household was identified as multidimensionally poor whose deprivation score greater than or equal to 0.333 (33%). The measure reveals the combination of deprivations that batter a household at the same time.

1.10.3.1. Description of the dimensions and indicators

Education (SDG 4- Quality Education)- "The MPI uses two indicators that complement each other within the education dimension: one looks at completed years

of schooling of household members, the other at whether children are attending school. Years of schooling acts as a proxy for the level of knowledge and understanding of household members. Both years of schooling and school attendance are imperfect proxies. They do not capture the quality of schooling, the level of knowledge attained or skills. Yet both are robust indicators, which are widely available, providing the closest feasible approximation to levels of education for household members" (Santos et al., 2011, p. 6).

Years of schooling (Sc) and school Attendance (At) are the indicator for the dimension Education. If any member of the household has not completed six years of schooling (standard definition of primary schooling used as functional literacy in international measures), the household is considered deprived. It indicates the household as deprived in education achievement and if any school aged child is not attending school or up to the age at which she or he would complete class 8, then the household is considered deprived in school attendance.

Health (SDG 2 &3)- Nutrition (N) and Mortality (M) are the indicators for the dimension health. "For children, malnutrition can have life-long effects in terms of cognitive and physical development. Adults or children who are malnourished are also susceptible to other health disorders; they are less able to learn and to concentrate and may not perform well at work. Most deaths in children can be prevented if it is caused by infectious disease or diarrhea. Child malnutrition also contributes to child death" (Santos et al., 2011, p. 8). Household is deprived in nutrition if any child or adult for whom nutritional information is malnourished/underweights. Household is considered deprived in child mortality if any child within the last f has died in the past five years prior to the survey.

Standard of living: The MPI considers six indicators for standards of living which included three standard MDG now SDG indicators that are related to health and living standards, which "particularly affect women: access to clean drinking water, access to improved sanitation, and the use of clean cooking fuel. It also included two non-MDG indicators: access to electricity and flooring material. Both of these provide some rudimentary indication of the quality of housing for the household. The final indicator

covers the ownership of some consumer goods: radio, television, telephone, bicycle, motorbike, car, truck and refrigerator" (Santos et al., 2011, p. 8).

Six indicators used for accessing the basic amenities of life and quality in dwelling are electricity (E), water (W), sanitation (S), housing (H), assets (A) and cooking fuel. Electricity (SDG 7-)-deprived if the household has no electricity connection/ if the household lacks access to electricity, water (SDG 6)- if the household lacks an improved source of drinking water or if household has no access to clean drinking water or clean drinking water is at least 30-minute walk round trip, the household is deprived, sanitation (SDG 11)- the household is deprived if the household lacks an improved sanitation facility or if it is shared , housing (SGD 11)- the household is deprived if at least one of the three housing materials for roof, walls and floor are made of rudimentary materials or house has dirt floor or of natural materials or the roof or the walls are made of rudimentary materials, assets (SDG 1)-deprived if the household does not own more than one of these assets- radio, TV, computer, animal cart, bicycle, mobile/telephone, motorbike or refrigerator and does not own a car or truck and lastly, cooking-fuel (SDG 2)-deprived if the household does not have gas connection and uses natural materials for cooking or if the household lacks non-solid cooking fuel ((Santos & Alkire, 2015b, OPHI, 2018).

Table no. 1.4: Dimensions, indicators, deprivation cut-offs/ thresholds and weights

Dimensions	Indicators	Deprivation cut-offs (the household is deprived if)	weights
Education (1/3)	Years of schooling (SDG4)	Any one of the members has not completed 6 yrs. of schooling (any member aged 10 years or older)	1/6
	School Attendance (SDG4)	At least one school aged child not enrolled in school (I to 8 yrs.)	1/6

Health (1/3)	Nutrition (SDG2)	Any one member of the household is malnourished for whom nutritional information is malnourished.	1/6
	Child Mortality (SDG3)	Any child has died in the family (prior to 5 years of the survey)	1/6
Living Standards (1/3)	Electricity (SDG7)	The household has no electricity	1/18
	Drinking Water (SDG6)	The household has no access to clean drinking water or clean drinking water is at least 30-minute walk from home (round trip)	1/18
	Sanitation (SDG11)	The household lack improved sanitation or if it is shared	1/18
	Housing (SDG11)	At least one of the three housing materials for roof, walls and floor are made of rudimentary materials.	1/18
	Assets (SDG1)	The households do not own more than one of these assets: radio, TV, telephone, bicycle, computer, motorbike, refrigerator or does not own a car or a truck	1/18
	Cooking fuel (SDG2)	The households cook with woods, charcoal, shrubs or dungs	1/18

Source: Final draft (October 2011) MPI: Construction &Analysis, & GMPI 2018.

#Note: In the parenthesis are the SDG which complements to the indicators, the figures are the weights attached with specific dimension and each indicator is weighted equally.

1.10.3.2. Alkire Foster Methodology

The Alkire Foster method captures both the headcount of those who are multidimensional poor using the counting approach and the intensity of poverty among the poor making the MPI as valuable measure to capture the extent of acute poverty. MPI values are the product of the incidence (H); the proportion of people who live in multidimensional poverty and intensity of poverty (A); the average deprivation score among multidimensionally poor people. MPI values range from 0 to 1; higher values imply higher poverty" (Aderinto et al., 2024b, pp. 2-4), where 0 representing no poverty and 1 representing universal poverty and deprivation (Alkire et al., 2015). By identifying who is poor, the nature of their poverty (their deprivation profile) and how poor they are (their deprivation score), the global MPI complements the international $2.15 a day poverty rate, linking/measuring nonmonetary deprivations" (Aderinto et al., 2024b, pp. 2-4).

The formula for calculating MPI

$$\mathbf{MPI}=H\times A$$

Where H is the multidimensional headcount ratio, it is the proportion of the multidimensionally poor in the population.

$$H=\frac{q}{n}$$

Where q is the number of people who are multidimensionally poor and n is the total population.

A is the intensity of poverty, which reflects the proportion of the weighted component indicators in which, on an average, poor people are deprived. For poor households only (deprivation score c of 33.3 percent or higher), the deprivation scores are summed and divided by the total number of poor people: $A=\frac{\sum_i^q c_i}{q}$

Where c_i is the deprivation score the ith poor person experiences.

The deprivation score c_i of the ith person can be exprerssed as the sum of the weights associated with each indicator *j* (*j*=1, 2, …, 10) in which person *i* is deprived, $c_i = c_{i1} + c_{i2} + \ldots + c_{i3}$

The contribution of Dimension k to multidimensional poverty can be expressed as

$\text{Contrib}_k = \frac{\sum j \in k \sum_j^q c_{ij}}{n} / MPI$

Where j is the indicator belonging to *i* the dimensions in which the household is deprived.

Decomposing by urban and rural population the formula is

$$MPI_{country} = \frac{n_U}{n} MPI_U + \frac{n_R}{n} MPI_R$$

Where, $U and\ R$ denotes the Urban and Rural, and $\frac{n_U}{n}$ is the population of urban areas divided by the total population and similarly for $\frac{n_R}{n}$ (assuming that $n_U + n_R = n$).

A contingency table for deprivations in two indicators

Cross-tabulations/ contingency tables between two dichotomous variables.

Dimension j' or Dimension 2				
		Non-deprived	Deprived	Total
Dimension j or Dimension 1	Non-deprived	$P_{00}^{jj'}$	$P_{01}^{jj'}$	P_{0+}^{j}
	Deprived	$P_{10}^{jj'}$	$P_{11}^{jj'}$	P_{1+}^{j}
	Total	$P_{+0}^{jj'}$	$P_{+1}^{j'}$	1

Source: Alkire, S., Roche, J. M., Ballon, P., Foster, J., Santos, M. E., & Seth, S. (2015). *Multidimensional Poverty Measurement and Analysis*. Oxford University Press, USA.

The number of people deprived and non-deprived in the first dimension is denoted as P_{1+}^{j} and P_{0+}^{j} respectively; whereas, the number of people deprived and non-deprived in the second dimension are denoted by $P_{+1}^{j'}$ and $P_{+0}^{jj'}$ respectively. P_{1+}^{j} represent the proportion of people deprived or the headcount ratio in Dimension 1. The number of

people deprived in both dimension is denoted by $P_{11}^{jj'}$, the number of people deprived in the first but not the second dimension is denoted by $P_{10}^{jj'}$, and the number of people deprived in the second and not in the first dimension is denoted by $P_{01}^{jj'}$. $P_{11}^{jj'}$ people are deprived in both dimension and the sum of $P_{11}^{jj'} + P_{01}^{jj'} = P_{10}^{jj'}$ is the number of people deprived in at least one dimension.

The data was analyzed by the above-mentioned tools and techniques.

1.10.3.3. Karl Pearson correlation-coefficient was also applied for the analysis

The formula is:

Karl Pearson Correlation-coefficient

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2}\sqrt{\sum(y_i - \bar{y})^2}}$$

Where:

$x_i, y_i = individual\ data\ points$

$\bar{x}, \bar{y} = means\ of\ x\ and\ y$

$r\ ranges\ from -1\ to +1$:

$r > 0: positive\ correlation$

$r < 0: negative\ correlation$

$r = 0: no\ linear\ correlation$

There is no accurate method of estimating poverty as every method has its flaws and limitations. If there had been an accurate measurement of poverty, poverty would have been eradicated long time back. “Although there is no perfect poverty measure, an effective one should be least imperfect” and, “a least imperfect poverty measure is one which sufficiently acknowledges that poverty is, by nature, multidimensional, complex, experiential and individual- or context-specific” (Gweshengwe, 2019, p.). Since the MPI is a different approach as it considers the crucial dimensions of a

people's life unlike income/ consumption approach which takes into account only one dimension in coming up with conclusion whether a person is better off or below a fixed line.

1.11. Organization of the Study

Chapter 1: Introduction

This chapter contains the background of the study, literature review, research gap, statement of the problem, objective of the study, hypothesis, methodology, and organization of the study.

Chapter 2: Education, Health, Standard of Living Deprivation

This chapter deals with education deprivation in terms of years of schooling and school attendance, health deprivation in terms of child mortality and nutrition and standard of living deprivation in terms of drinking water, sanitation, electricity, cooking fuel, housing and assets.

Chapter 3: Assessment of Poverty through Multidimensional Poverty Index (MPI).

This chapter analyses the level of poverty through the assessment of Multidimensional Poverty Index of the two districts under study.

Chapter 4: Conclusion and Suggestion

This chapter is concluded by highlighting the findings and suggesting measures to tackle the problem of multidimensional poverty in Nagaland.

- Bibliography

Chapter 2

EDUCATION, HEALTH AND STANDARD OF LIVING DEPRIVATION

This chapter examined education deprivation in terms of years of schooling and school attendance, health deprivation in terms of child mortality and nutrition and standard of living deprivation in terms of electricity, drinking water, sanitation, housing, assets and cooking fuel.

2.1. EDUCATION

This section highlighted the overall educational institution, literacy rate and the educational deprivation experienced by the people of the state. When finding the educational deprivation, the study was limited to upper primary stage/middle stage, which was mainly to know whether the people can read or write i.e., to know the "level of knowledge and understanding of household members" and to know "whether children are attending school" (Santos et al., 2011, p. 6). Basing on it, two indicators which acted as a close proxy i.e., years of schooling and school attendance have been used to check the education deprivation level.

2.1.1.1. Educational Institutions

The department of Education was established in the state in 1964, which at present is known as School Education, where the department administers and manages the Primary, Elementary, Secondary and Higher Secondary Education. It has three branches- Directorate of School Education (DoSE), State Council and Educational Research and Training (SCERT) and Nagaland Board of School Education (NBSE). It comprises of 5 class structure- Pre-Primary (Class A and B), Primary Stage (Class 1-5), Upper Primary Stage/Middle Stage (Class 6-8), Secondary Stage/High School Stage (Class 9 and 10) and Higher Secondary Stage (Class 11 and 12).

2.1.1.2. Educational institutions in Nagaland

The number of educational institutions, Teachers, and enrolment of Students in Nagaland is presented in Table no.2.1.1.2. From the table it is observed; there are 1932 government schools; with 14802 teachers which was found to be higher in number as

compared to 763 private schools; with 7640 teachers, offering education to the people of the state. It is seen; there is a mismatch between the number of government schools and teachers as against the number of private schools and teachers.

The educational institution comprises of four categories as presented in the table: i. Primary school (class 1-5), ii. Middle school/Upper-Primary (class 6-8), iii. Secondary school/High-school (class 9-10) and, iv. Higher Secondary school (class 11-12). The table shows, under Government institutions there are 1030 Primary School, 609 Middle School, 249 Secondary School, and 44 Higher Secondary School whereas, under Private institutions there are 128 Primary School, 300 Middle School, 323 Secondary School and 12 Higher Secondary School in the state.

It was observed in Government institutions; there are a total of 8380 teacher teachings Primary classes, 4072 teacher teaching Middle classes, 1715 teachers teaching Secondary classes and 632 teacher teaching Higher Secondary classes, whereas, in Private institutions; 3457 teachers teaching Primary classes, 1750 teachers teaching Middle classes, 1632 teacher teaching Secondary classes, and 801 teacher teaching Higher Secondary classes.

It was also observed in Government institutions; there are 55957 students enrolled in Primary School whereas, 105313 students are enrolled in Private Primary school, 30496 students are enrolled in Government Middle School whereas, 57593 students are enrolled in Private Middle school, 16537 students are enrolled in Government High School, whereas, 36637 students are enrolled in Private High School, and 11349 students are enrolled in Government Higher Secondary school whereas, 26742 students are enrolled in Private Higher Secondary School. It is observed in the table; higher number of students were enrolled in Private institutions than Government institution, though it was observed that Government institutions have higher number of schools and teachers as compared to the Private institutions. A decreasing pattern in enrolments is observed as the class goes up.

The table also shows Pupil Teacher Ratio (PTR), which is defined as the number of students in relation to the number of teacher available to teach. The Pupil Teacher Ratio for the state is 9 for primary, 7 for middle, 16 for high school and 16 for higher secondary. It means 9 students for every one teacher in Primary class, 7 students for

every one teacher in Middle/Upper Primary class, 16 students for every one teacher in High school and 16 students for every one teacher in Higher Secondary class.

Table no.2.1.1.2: Number of Government educational institutions, Teachers, and enrolment of Students in Nagaland

Type of School	Govt.	No. of Teachers	Enrolment of students	Private	No. of Teachers	Enrolment of students	PTR
Primary School (Class 1-5)	1030	8380	55957	128	3457	105313	9
Middle School (Class 6-8)	609	4072	30496	300	1750	57593	7
High School (Class 9-10)	249	1715	16537	323	1632	36637	16
Higher Secondary School (Class 11-12)	44	635	11349	12	801	26742	16
Total	1932	14802	114,339	763	7640	226,285	40

Source: Annual Administrative Report 2023-24, Government of Nagaland & UDISE+2023-24
Note: PTR is Pupil Teacher Ratio, Govt. is Government

2.1.1.3. Educational Institutions in Rural and Urban (Sample)

The number of educational institutions, Teachers, and enrolment of Students in Rural areas is presented in Table no.2.1.1.3. The table shows; there are in total 10 Government Schools, with 74 teachers, and an enrolment of 566 students. The Government School consisting of 4 Primary Schools, 5 Middle Schools, and 1 High School. In Government Primary School; with a total of 19 teachers and an enrolment of 145 students, in Government Middle Schools; with a total of 41 teachers and an enrolment of 418 students and in Government High School; with a total of 14 teachers

and an enrolment of 71 students. The table shows in Urban; there is only one Government School, with 27 teachers and 291 enrolments of students, i.e., Government High School under Kohima Urban.

The table shows in Kohima Rural; there are in total 5 government schools with 36 number of teachers, and an enrolment of 191 students. The Government school consisting of 3 Primary Schools, 1 Middle Schools, and 1 High School. In Government Primary Schools; with a total of 12 teachers and an enrolment of 120 students, in Government Middle School; with a total of 10 teachers and an enrolment of 43 students and in Government High School; with a total of 14 teachers and an enrolment of 71 students. The table shows in Peren Rural; there are in total 5 Government Schools; with 38 number of teachers, and an enrolment of 375 students. The Government School comprising of 1Primary School, 4 Middle Schools, and no High school. In Government Primary Schools; with a total of 7 teachers and an enrolment of 25 students, and, in Government Middle Schools; with a total of 31 teachers and an enrolment of 375 students.

It is to be noted absence of Government Primary, Middle and High School under Peren Urban (sample study), whereas, in Kohima Urban (sample study), absence of Government Primary and Middle School.

Table no.2.1.1.3: Number of Government educational institutions, Teachers, and enrolment of Students in Rural and Urban

Particulars	**Rural**	**Kohima Rural**	**Peren Rural**	**Urban**	**Kohima Urban**
No. of schools	10	5	5	1	1
No. of teachers	74	36	38	27	27
Total no. of enrolments	566	191	372	291	291
No. of Primary schools	4	3	1	0	0
No. of Primary teachers	19	12	7	0	0
Enrolment of students in Primary school	145	120	25	0	0

No. of Middle schools	5	1	4	0	0
No. of Middle school teachers	41	10	31	0	0
Enrolment of students in Middle class	418	43	375	0	0
No. of High school	1	1	0	1	1
No. of High school teachers	14	14	0	27	27
Enrolment of students in High school	71	71	0	291	291

Source: Field Survey 2019-20 & Department of School Education, Government of Nagaland

2.1.1.4. Educational Institutions in Kohima district

The number of educational institutions, Teachers, and enrolment of Students in Kohima district is presented in Table no.2.1.1.4. As per the table; there are in total 167 Government Schools with a total of 2015 teachers and an enrolment of 8218 students. The table shows that; there are 88 Government Primary School; with a total of 870 primary teachers and an enrolment of 4425 students. It is also seen in the table; there are 53 Government Middle Schools; with a total of 700 teacher and an enrolment of 3177 students, and 16 Government High School with a total of 324 teachers and an enrolment of 1616 number of students.

In rural (Sample), there are a total of 5 Government School, with 69 teacher and an enrolment of 191 students. The Government School comprising of three Government Primary School; with 12 teachers and an enrolment of 120 students, one Government Middle School; with 10 teachers and an enrollment of 43 students, and one Government High School; with 14 teachers and an enrolment of 71 students. The table shows; in Kiruphema village, there are four Government Schools comprising of one Government High School and three Government Primary Schools. In Government Primary School; there are in total 12 primary teacher, with an enrolment of 120 students. In Government High School; there are a total of 14 teachers, with an

enrolment of 71 students. The table shows, in Mengujuma village; there is only one Government Middle School, with a total of 10 teachers and enrolment of 43 students.

In Urban, there is one Government High School with 27 teachers and an enrolment of 291 students. From the table it is observed in Urban; there is one Government School i.e., Forest colony has one Government High school whereas, absence of government institutions in NHAK colony.

Table no.2.1.1.4: Number of Government educational institutions, number of Teachers, and Student enrolment in Kohima district.

Particulars	Kohima	Rural	Kiruphema	Mengujuma	Urban	Forest
No. of Government school	167	5	4	1	1	1
No. of Teacher	2015	36	26	10	27	27
No. of Enrolments	9218	191	191	43	291	291
No. of Primary schools	88	3	3	0	0	0
No. of Primary Teacher	870	12	12	0	0	0
Enrolment of students in Primary Class	4425	120	120	0	0	0
No. of Middle schools	53	1	0	1	0	0
No. of Middle Teacher	700	10	0	10	0	0
Enrolment of students in Middle Class	3177	43	0	43	0	0
No. of high schools	16	1	1	0	1	1
No. of High school Teacher	324	14	14	0	27	27
Enrolment of students in High School	1616	71	71	0	291	291

Source: *AAR 2023-24* & Field Survey 2019-20

2.1.1.5. Educational Institutions in Peren district

The number of educational institutions, Teachers, and enrolment of Students in Peren districts is presented in Table no.2.1.1.5. As per the table, there are in total 132 Government Schools; with a total of 853 teachers and, an enrolment of 4906 students. The table shows that, there are 73 Government Primary School; with 390 teachers and an enrolment of 3773 students, 46 Government Middle School; with 294 teacher and an enrolment of 2200 students, and a total of 15 Government High School; with 136 teachers and an enrolment of 913 students.

In rural (sample); there are a total of 5 Government School, with 76 teacher and an enrolment of 400 students. The Government School comprising of one Government Primary School; with 7 teachers and an enrolment of 50 students, 4 Government Middle School; with a total of 31 teachers and an enrolment of 375 students. The table shows in Samzuiram village; there are 3 Government Middle School, with a total of 24 teachers, and an enrolment of 348 students. In New Poilwa village; there are two Government Schools, with a total of 52 teachers and an enrolment of 77 student. In Government Primary School; there are a total of 7 teachers, with an enrolment of 50 students, and in Government Middle School; there are in total 7 teachers with an enrolment of 27 students. It is observed under Peren Urban; Midland colony and Stadium colony lack Government School in their vicinity. It is to be noted in Peren Urban; absence of government institutions, particularly in the colonies under study i.e., Midland and Stadium colony.

Table no.2.1.1.5: Number of Government educational institutions, number of Teachers, and Student enrolment in Peren district.

Particulars	Peren	Rural	Samzuiram	New Poilwa
Number of Government school	132	5	3	2
Number of Teacher	853	76	24	52
Number of Enrolments	4906	400	348	77
Number of Primary schools	73	1	0	1
Number of Primary Teacher	390	7	0	7
Enrolment of students in Primary Class	3773	50	0	50
Number of Middle schools	46	4	3	1

Number of Middle Teacher	294	31	24	7
Enrolment of students in Middle class	220	375	348	27
Number of high schools	15	0	0	0
Number of High school teacher	136	0	0	0
Enrolment of students in High School Class	913	0	0	0

Source: *AAR 2023-24* & Field Survey 2019-20, Department of School Education, Govt. of Nagaland

Thus, it is observed in Nagaland; there is mismatch between the number of Government Schools (1932) and teachers (14802) as against the number of Private Schools (763) and teachers (7640). It was observed; higher number of students were enrolled in Private institutions than Government institution, though it was found Government institutions have higher number of schools and teachers as compared to the Private institutions. It observed, a decreasing pattern in enrolments as the class goes higher.

It is observed, Rural areas (10) have higher number of Government School than Urban areas (1), higher number of teachers in Rural (74) than Urban (27), and higher enrolment of students in Rural (566) than Urban (91). In Rural there are 4 Government Primary School, 5 Government Middle School and 1 High School whereas Urban, lack Government Primary and Middle School, but there is one Government High School. It was observed, Urban has higher number of Government High School teachers (27) and enrolment of students (291) than Rural with 14 teachers and an enrolment of 71 students.

It was also observed; Kohima district has higher number of government institutions and teachers than Peren district. Under Kohima Rural, Kiruphema village has higher number of Government School (4) as compared to Mengujuma village (1). Under Peren Rural, Samzuiram village (3), has higher number of schools as compared to New Poilwa village (2). It was observed, Mengmujuma village and Samzuiram village lacks Government Primary School, Kiruphema village lacks Government Middle School and Mengujuma village, Samzuiram village and New Poilwa village lack Government High School. It is seen from the table that, Kiruphema village Government Primary School has higher number of teachers (12), and enrolment of students (120) as compared to New Poilwa village; with 7 teachers and an enrolment of 25 students.

Government Middle S chool in Samzuiram village has higher number of teachers (24), and enrolment of students (348), followed by Mengujuma village; with 10 teachers and enrolment of 43 students, and New Poilwa village with 7 teachers and enrolment of 27 students, respectively.

2.2.1 Literacy rate of Nagaland

The literacy rate of Nagaland is presented in Table 2.2.1. It is observed in the table that; the literacy rate was approximately 80%; male literacy rate was approximately about 83% and female literacy rate was approximately about 76%. It was observed; male literacy rate was higher in percentage than female literacy rate. It indicated, male population in Nagaland were more literate than the female population.

The table shows Rural literacy rate to be 75%; male literacy rate was 79% and female literacy rate was 72%. It was observed; male literacy rate was higher in percentage than female literacy rate. It indicated, male population in Rural were more literate than the female population. The table shows, Urban literacy rate to be 90%; male literacy rate was 92% and female literacy rate was 87%. It was observed; male literacy rate was relatively much higher in percentage than female literacy rate. It indicated, a significant gender gap between male and female literacy rate in Urban areas. At the same time, it indicated; male population in Urban to be more literate than the female population. It is also observed in the table; Rural literacy was lower in percentage than Urban literacy rate. It means in Nagaland; Urban population were more literate than Rural population.

The table also shows, literacy rate of Kohima district as 85%; male literacy rate was 88% and female literacy rate was 81%. It is observed; male literacy rate was higher in percentage than female literacy rate. It means in Kohima district; male population were more literate than female population. The table shows, the literacy rate of Peren district to be 78%; where male literacy rate was 83% and female literacy rate was 73%. It is observed; male literacy rate was higher in percentage than female literacy rate. It means in Peren district; male population were more literate than female population.

It is observed from the table; Urban has higher percentage of literate (90%), followed by Kohima district (85%), Nagaland the state itself (80%), Peren district (78%) and

Rural (75%), respectively. It was observed, Urban has higher percentage of literate (92%), followed by Kohima district (89%), both Nagaland in general and Peren district (83%), respectively. It means male population in Urban areas were more literate than Nagaland as a whole and Peren district. It was observed from the table, Urban has higher percentage of literate (87%), followed by Kohima district (81%), Nagaland as a whole (76%) and Peren district (73%), respectively. It means female population in Urban areas were more literate than the state itself and Peren district.

Table no. 2.2.1: Literacy rate of Nagaland

Literacy rate (in %)			
Area	**Total**	**Male**	**Female**
Nagaland	79.55	82.75	76.11
Rural	75.35	78.96	71.51
Urban	89.62	91.62	87.4
Kohima	85.23	88.69	81.48
Peren	77.95	82.84	72.58

Source: Nagaland Statistical Handbook 2023& Census 2011

2.2.2. Literacy status of Kohima district

The literacy rate of Kohima district is presented in Table 2.2.2. From the table, it is observed that Literary rate as 85%; male literacy rate was 89% and female literacy rate to be 81%. It is observed; Kohima Rural literacy rate to be 81% which is lower in percentage than the district itself (85%) and Kohima Urban literacy rate (90%). It indicated, in Kohima district; Urban population were more literate than Rural population and the district itself.

Kiruphema village and Mengujuma village were used as the sample villages. The literacy rate of Kiruphema Bawe village was 90%; male literacy as 92% and female literacy as 89%. It indicated; male population were more literate than female population. The table shows; the literacy rate of Mengujuma village as 86%; male literacy rate as 91% and female literacy as 82%. It was observed; male population to be more literate than female population. The table shows literacy rate of Kohima Urban as 90%; male literacy rate as 92% and female literacy rate as 88%. It was observed; male has higher percent of literacy rate than female. It means; male population were more literate than female population.

It is observed, Kohima Urban literacy rate to be higher in percent (90%) than Kohima Rural literacy rate (85%). It indicated, Kohima Urban population were more literate than Kohima Rural. Kiruphema village literacy rate (90%) was higher in percentage than Mengujuma village (86%). It indicated; Kiruphema village population to be more literate than Mengujuma village population. It was also observed; both male literacy rate (92%) and female literacy rate (89%) to be higher in Kiruphema village, as compared to Mengujuma village. It indicated; male and female population of Kiruphema village were more literate than male and female population of Mengujuma village.

Table no.2.2.2: Literacy rate of Kohima district

Literacy rate (in %)			
Area	**Total**	**Male**	**Female**
Kohima	85.23	88.69	81.48
Rural	81.14	78.96	71.51
Kiruphema village	90.21	91.67	88.78
Mengujuma village	86.43	91.00	82.27
Urban	90.09	92.26	87.74

Source: Nagaland Statistical Handbook 2023

2.2.3. Literacy status of Peren districts

The Literacy rate of Peren district is presented in Table no.2.2.3. From the table, it is observed that Literary rate as 78%; male literacy rate as 83% and female literacy rate as 73%. It was observed, the literacy rate of Peren Rural as 77%, which was found to be lower in percent than the district as a whole (78%) and Peren Urban (86%). It indicated, Urban population were more literate than Rural population and the district itself.

Samzuiram village and New Poilwa village are used as the sample villages. The literacy rate of Samzuiram village as 87%; male literacy as 92% and female literacy as 83%. It indicated, in Samzuiram village; male population were more literate than female population. The table shows, the literacy rate of New Poilwa village as 72%; male literacy rate as 80% and female literacy as 64%. It was observed a significant gender gap where male population were more literate than female population. The table shows literacy rate of Peren Urban as 86%; male literacy rate as 91% and female

literacy rate as 81%. It was observed male has higher percent of literacy rate than female. It means; male population were more literate than female population.

It is observed from the table, Peren Urban literacy rate to be higher in percentage (86%) than Peren Rural (77%). It indicated, Peren Urban population were more literate than Peren Rural. It was observed; Samzuiram village literacy rate (87%) was higher in percentage than New Poilwa village (72%). It indicated, Samzuiram village population to be more literate than New Poilwa village population. It was also observed; both male literacy rate (92%) and female literacy rate (83%) to be higher in Samziuram village, as compared to New Poilwa village. It indicated, male and female population of Samzuiram village as more literate than male and female population of New Poilwa village. It is to be noted, the literacy rate of Kohima Urban (NHAK and Forest colony) and Peren Urban (Midland and Stadium colony) as a secondary source of data was unavailable.

Table no.2.2.3: Literacy rate of Peren district

Literacy rate (in %)			
Area	**Total**	**Male**	**Female**
Peren	77.95	82.84	72.58
Rural	76.66	81.61	71.14
Samzuiram	87.45	91.58	83.35
New Poilwa	71.56	79.63	63.74
Urban	85.55	90.60	80.57

Source: Nagaland Statistical Handbook 2023 and Census 2011

Thus, it is observed in Nagaland; literacy rate of Urban (90%) to be higher than the state itself (80%). Male population to be more literate than the female population in Nagaland. It was observed, literacy rate of Urban (90%) to be higher than Rural (75%). Both male and female literacy rate to be higher in Urban than Rural. It was observed; population of Kohima district (85%) was higher in literacy rate than Peren district (78%); male literacy rate of Kohima district (89%) was higher than Peren district (82%), and, female literacy of Kohima district (81%) was higher than female literacy rate of Peren district (73%).

2.3.1. Education deprivation of Nagaland

Education deprivation of Nagaland with year of schooling and school attendance as indicator is presented in Table no.2.3.1. The table shows, approximately 46% of the sample households were deprived in years of schooling. It indicated, 46% of the sample households in Nagaland have not completed six years of schooling. In Rural; 45% of the sample households, in Urban; 47% of the sample households, in both Kohima and Peren district with similar percentage i.e., 46% of the sample households, were deprived in years of schooling. It indicated, in Rural; 45% of the households, in Urban; 47% of the households and in both the district's; 46% of the households have not completed six years of schooling. It can be seen from the table; households in Urban (47%) have higher percentage of deprivation in years of schoolings, followed by with similar percentage of deprivation; Nagaland in general, Rural areas, and both Kohima and Peren districts. It means, in Urban; higher percentage of households have not completed six years of schooling than the state as a whole, followed by Rural areas and both the districts. The table shows, absence of indicator school attendance. It indicated that, all school aged child were attending school, which was a positive parameter.

The table also shows deprivation in indicator years of schooling based on uncensored headcount ratio. It can be seen; 40% of households in Rural, 39% of the household in Urban, 25% of the households in Kohima district and 46% of the households in Peren district were deprived in indicator years of schoolings. It is observed that, there is a mismatch between censored headcount ratio and uncensored headcount ratio. For instance, in Rural areas based on censored headcount ratio; 45% of the households were deprived in indicator years of schoolings, whereas based on uncensored headcount ratio; 40% of the household was found to be deprived. It was observed, absence of indicator school attendance in Nagaland. It indicated that; all school aged child were attending school.

Table no.2.3.1: Education deprivation of Nagaland

Indicators → **Area ↓**	**Years of schooling based on censored headcount ratio**	**Deprivation based on uncensored headcount ratio**

Nagaland	45.90%	
Rural	45.45%	40%
Urban	47.43%	39%
Kohima	46.18%	25%
Peren	45.87%	46%

Source: Field survey 2019-2020

2.3.2. Education deprivation of Kohima district

Education deprivation of Kohima district with year of schooling and school attendance as indicator is presented in Table no.2.3.2. As shown in the table, 46% of the households in Kohima district, 45% of the households in Kohima Rural, 50% of the households in Kiruphema village, and 45% of the households in Mengujuma village were deprived in indicator years of schooling. It indicated 46% of the households in Kohima district, 45% of the households in Kohima rural, 50% of the households in Kiruphema village and 45% of the households in Mengujuma village have not completed six years of schooling. it was observed, Kiruphema village have higher percent of deprivation in indicator years of schooling than Mengujuma village. It means, Kiruphema village households were more deprived than Mengujuma village household. It also means that, Mengujuma village households were more literate than Kiruphema village households. The table shows, 47% of the households in Kohima Urban, 37% of the households in NHAK colony and 50% of the households in Forest colony were deprived in indicator years of schooling. It indicated, 47% of the households in Kohima Urban, 37% of the households in NHAK colony and 50% of the households in Forest colony have not completed six years of schooling. Forest colony has higher percent of deprivation than NHAK colony. It means, Forest colony households were more deprived than NHAK colony. It also means that, NHAK colony households were more literate than Forest colony households.

It is also observed, both Kiruphema village and Forest colony has higher percentage of deprivation (50%), followed by Kohima Urban (47%), district itself (46%) and with similar percentage of deprivation Kohima Rural and Mengujuma village (45% each), and NHAK colony (37%), respectively.

The table also shows indicator years of schooling based on uncensored headcount ratio. It can be seen from the table; Mengujuma village has higher percent of deprivation (47%), followed by Kiruphema village (36%), Kohima Rural (33%), Forest colony (32%), the district itself (25%), Kohima Urban 22% and NHAK colony (12%) respectively, whose households have not completed six years of schoolings. It is observed that, there is a mismatch between censored headcount ratio and uncensored headcount ratio. For instance, in Kohima district based on censored headcount ratio; 46% of the households were deprived in indicator years of schoolings, whereas based on uncensored headcount ratio; 25% of the household was found to be deprived. It was also observed, absence of indicator school attendance under Kohima district. It indicated that; all school aged child were attending school under Kohima district.

Table no.2.3.2: Education deprivation of Kohima district

Indicators → **Area ↓**	**Years of schooling based on censored headcount ratio**	**Deprivation based on uncensored headcount ratio**
Kohima	46.18%	24.64%
Rural	44.85%	32.80%
Kiruphema village	49.85%	36.43%
Mengujuma village	45.06%	46.95%
Urban	47.03%	21.6%%
NHAK colony	37.36%	12.46%
Forest colony	49.85%	32.30%

Source: Field survey 2019-2020

2.3.3. Education deprivation of Peren district

Education deprivation of Peren district with year of schooling and school attendance as indicator is presented in Table no.2.3.3. As shown in the table, 46% of the households in Peren district, 45% of the households in Peren Rural, 46% of the households in Samzuiram village, and 38% of the households in New Poilwa village were deprived in indicator years of schooling. It indicated, 46% of the households in Peren district, 45% of the households in Peren Rural, 46% of the households in Samzuiram village and 38% of the households in New Poilwa village have not completed six years of schooling. It was observed; Samzuiram village (46%) have higher percentage of deprivation in indicator years of schooling than New Poiwa

village (38%). It means, Samzuiram village households were found to be more deprived than New Poilwa village household. It also means, households of New Poilwa village to be more literate than Samzuiram village. The table shows, 48% of the households in Peren Urban, 48% of the households in Midland colony and 50% of the households in Stadium colony were deprived in indicator years of schooling. It indicated, 48% of the households in Peren Urban, 48% in Midland colony and 50% in Stadium colony have not completed six years of schooling. It was observed; Stadium colony has higher percent of deprivation than Midland colony. It means, Stadium colony households were more deprived than Midland colony. It also means, Midland colony households as more literate than Stadium colony.

It is observed; Stadium colony has highest percent of deprivation (50%), followed by both Peren Urban and Midland colony with similar percent of deprivation (48% each), both the district itself and Samzuiram village with similar percent of deprivation (46% each), Peren Rural (45%) and New Poilwa village (38%), respectively.

The table also shows deprivation in indicator years of schooling based on uncensored headcount ratio. It is observed from the table; Midland colony has highest percent of deprivation (63%), followed by Peren Urban (55%), Peren district itself (45%), Samzuiram village (43%), in both Peren Rural and Stadium colony with similar percentage of deprivation (41%), and New Poilwa village (31%) respectively, whose households have not completed six years of schooling. It is observed that, there is a mismatch between censored headcount ratio and uncensored headcount ratio. For instance, in Peren Rural based on censored headcount ratio; 54% of the households were deprived in indicator years of schoolings, whereas based on uncensored headcount ratio; 41% of the household was found to be deprived. It was also observed, absence of indicator school attendance. It indicated that; all school aged child were attending school in Peren district.

Table no. 2.3.3: Education deprivation of Peren district

Indicators → Area ↓	**Year of schooling based on censored headcount ratio**	**Deprivation based on uncensored headcount ratio**
Peren	45.87%	45.54%
Rural	54.31%	41.24%
Samzuiram	45.56%	42.59%

New Poilwa	38.32%	30.92%
Urban	47.98%	55.02%
Midland colony	47.82%	63.19%
Stadium colony	49.85%	40.47%

Source: Field survey 2019-2020

Thus, it is observed under Education deprivation only indicator years of schooling contributed to the deprivation; where 46% of the household in Nagaland, 45% of the household in Rural and 47% of the households in Urban were deprived. It can be seen clearly; Urban households have higher percent of deprivation than Rural and Nagaland as a whole. It was observed, both the districts faced similar percent of deprivation (46%). In Kohima Rural; 46% of the household and 45% of the household in Peren Rural were deprived. It indicated, Kohima Rural have higher percentage of deprivation than Peren Rural. In Kohima Urban; 47% of the households and 48% of the households in Peren Urban were deprived. It indicated, Peren Urban have higher percent of deprivation than Kohima Urban. Under Kohima Rural, Kiruphema village (50%) contributed higher percent of deprivation, as compared to Mengujuma village (45%). Under Peren Rural, Samzuiram village (46%), contributed higher percent of deprivation as compared to New Poilwa village (38%). Under Kohima Urban, Forest colony (50%) contributed higher percent of deprivation as compared to NHAK colony (37%). Under Peren Urban, Stadium colony (50%) contributed higher percent of deprivation as compared to Midland colony (48%). The second indicator shows absence of deprivation, which is a positive indication that all school aged child were attending school in Nagaland as per the study.

The study also observed deprivation in indicator years of schooling based on uncensored headcount ratio. It can be seen; 40% of households in Rural, 39% of the households in Urban, 25% of the households in Kohima district and 46% of the households in Peren district were deprived in indicator years of schoolings. It is observed in Kohima district; Mengujuma village has higher percent of deprivation (47%), followed by Kiruphema village (36%), Rural (33%), Forest colony (32%), the district itself (25%), Urban (22%) and NHAK colony (12%), whose households have not completed six years of schoolings. The study observed in Peren district; Midland

colony has higher percent of deprivation (63%), followed by Urban (55%), Peren district itself (45%), Samzuiram village (43%), in both Rural and Stadium colony with similar percent of deprivation (41%), and New Poilwa village (31%) respectively, whose households have not completed six years of schooling.

It is to be noted; absence of the second indicator, school attendance in Nagaland. It indicated all school children attending schools. The study also observed, a mismatch between censored headcount ratio, and uncensored headcount ratio.

2.4. HEALTH

Health being another major factor related to poverty, it becomes imperative to study the status of health care system of Nagaland. This section examined the number of medical institutions comprising of Civil/District government hospitals, Community Health Centers (CHCs), Primary Health Centers (PHCs) and Sub-centers. This section analyzed the health deprivations using nutrition and child mortality as the indicators.

2.4.1 Medical Institutions in Nagaland

The number of medical institutions and practitioners in Nagaland is presented in Table no.2.4.1. From the table it is observed; there are 12 District Hospital known as Civil Hospital (1100 Beds), 2 T.B Hospital (100 Bed), 1 Mental Hospital (25 Bed), 16 Private Hospitals, 34 Community Health Centre (630 Beds), 142 Primary Health Centre (756 Beds), and 577 Subsidiary Health Centre. According to the Ministry of Health and Family Welfare in 2019, the number of Primary Health Centres (PHCs) functioning in Nagaland were 131 i.e., 126 Primary Health Centres functioning in Rural areas and 5 were functioning in urban areas. The table also shows medical practitioners in Nagaland, comprising of 290 General Doctors, 136 Specialist Doctors, 82 Nursing Sister, 713 Nurses, 1125 ANM/FHW, and, 363 pharmacists. It is to be noted; the Doctor Patient Ratio was found to be 1:4056, i.e., “Only 1 Doctor for every 4,056 people in Nagaland (India, 2024).

Table no.2.4.1: Number of medical institutions and practitioners in Nagaland

Sl. No	Information	Total
1	District Hospital	12
	Number of Bed	1100
2	TB Hospital	2

	Number of Bed	100
	Mental Hospital	1
	Number of Bed	25
3	Community Health Centre	34
	Number of Bed	630
4	Primary Health Centre	142
	Number of Bed	756
5.	Subsidiary Health Centre	577
6.	Doctors General	290
7.	Doctors Specialist	136
8.	Nursing Sister	82
9	Nurse	713
10.	ANM/FHW	1477
11.	Pharmacists	363
12.	Private Hospitals	16

Source: Nagaland Vision 2030 and Directorate of Health & Family Welfare

2.4.2. Medical Institutions in Rural and Urban (based on the sample)

The number of medical institutions and practitioners in Rural and Urban is presented in Table no.2.4.2. The table shows, in Rural (based on the sample), there were no private medical institutions and no government hospitals whereas in Urban, there are 3 Government Hospital and 6 Private Hospitals. In Rural; there is 1 Government Primary Health Centre with 6 bed and, in Urban; 2 Government Sub-centres. The number of medical practitioners in Rural, comprising of 2 Doctor Generals, 2 ANM, 2 FHW, and 2 pharmacists. There is no Government Primary Health Centre in Urban. In Urban; there is 1 District Hospital with 317 bed, 1 TB hospital with 50 bed, 1 Mental hospital with 25 bed, one Government Sub-centre and 6 Private Hospitals. The number of government medical practitioners in Urban, comprising of 30 Doctor Generals, 20 Doctor specialist, 10 nursing sister, 60 staff nurse, 54 ANM/FHW, and 2 pharmacists

It can be seen from the table, Rural population does not have the facility of Government nor private hospital, their medical needs are met by Primary Health Centre and Subcentres, if need arises, they have to come to the Urban set up for better medical facilities and treatment. It is also seen in Urban; the medical care and needs are provided by 3 Government Hospital, 6 Private Hospitals and one Sub-centre. It indicated, the population of Urban to be more privileged than the population of Rural. It has been reported, Nagaland faced challenges due to “inadequate healthcare

facilities, especially in remote and hilly regions i.e., rural and marginalized communities" unlike urban areas which are better off. There is also shortfall of health care professionals in rural areas (Nagaland Post, September 21 2023 Healthcare Landscape in Nagaland: Challenges and Progress).

Table no.2.4.2: Number of medical institution and practitioners in Rural and Urban

Sl. No	Particulars	Rural	Urban
1	District Hospital	-	1
	Number of Bed	-	317
2	T.B Hospital	-	1
	Number of Bed	-	50
3	Mental Hospital	-	1
	Number of Bed	-	25
4	Community Health Centre	-	-
	Number of Bed	-	-
5	Primary Health Centre	1	-
	Number of Bed	6	-
6	Subsidiary Health Centre	2	1
7	Doctors General	2	30
8	Doctors Specialist	-	20
9	Nursing sister	-	10
10	Staff Nurse	-	60
11	ANM/FHW	2	54
12	Pharmacist	2	2
13	Private Hospitals	-	6

Source: Directorate of Health and Family welfare & Field Survey 2019-20

2.4.3. Medical Institutions in Kohima district

The number of medical institutions in Kohima district is presented in Table no.2.4.3. The table shows, there were 3 Government hospitals comprising of one District Hospital knows as Naga Hospital Authority Kohima which is a 317 Bed Hospital, 1 T.B Hospital with 50 Bed, 1 Mental Health Hospital with 25 Beds, 6 Private Hospitals, 3 Community Health Centres (CHCs) which provided more specialized health care than Primary Health Centres (PHCs), 18 Primary Health Centres (PHCs), located at various parts under Kohima district for providing primary health care to rural communities and 43 Subcentres. Medical practitioners comprising of 48 Doctor

General, 56 Doctor specialist, 26 Nursing sister, 79 Staff nurse, 131 ANM/FHW and 69 Pharmacist.

The table shows, in Kohima Rural there is one Subcentre which is in Kiruphema village, with four medical practitioners, i.e., 1 Doctor General, 1 ANM, 1 FHW and 1 pharmacist. In Mengujuma village, it was observed that the village lack Government medical institutions. In need of medical assistance, the people have to go to near-by village where there are PHC/Sub-centres or they have to go to Urban set up if better facilities are required.

The table shows, in Kohima Urban there is one District Hospital, 1 T.B Hospital, 1 Mental Hospital and one Subcentre. Medical practitioners comprising of 30 Doctor General, 20 Doctor Specialist, 10 Nursing Sister, 60 Staff Nurse, 54 ANM/FHW and 2 pharmacists. It can be seen from the table, in NHAK colony; there is one District hospital known as Naga Hospital Authority Kohima, located in Kohima, the capital of the state. Medical practitioners in NHAK comprising of 30 Doctor Generals, 20 Doctor Specialist, 10 Nursing sister, 60 Staff nurse, 50 ANM and 2 pharmacists. The table shows, in Forest colony; there is one Sub-centre with 4 ANM Nurses.

Table no.2.4.3: Number of medical institutions and practitioners in Kohima district

Sl. No	Particulars	Kohima	Rural	Kiruphema	Urban	NHAK	Forest
1	District Hospital	1	-	-	1	1	-
	Number of Bed	317	-	-	317	317	-
2	T.B Hospital	1	-	-	1	-	-
	Number of Bed	50	-	-	50	-	-
3	Mental Hospital	1	-	-	1	-	-
	Number of Bed	25	-	-	25	-	-
4	Community Health Centre	3	-	-	-	-	-
	Number of Bed	36	-	-	-	-	-
5	Primary Health Centre	18	-	-	-	-	-
	Number of Bed	84	-	-	-	-	-
6	Subsidiary Health Centre	43	1	1	1	-	1
7	Doctors General	48	1	1	30	30	-

8	Doctors Specialist	56	-	-	20	20	-
9	Nursing sister	26	-	-	10	10	-
10	Staff Nurse	79	-	-	60	60	-
11	ANM/FHW	131	2	2	54	50	4
12	Pharmacist	69	1	1	2	2	-
13	Private Hospitals	6	-	-	-	-	-

Source: Directorate of Health & Family welfare and Field Survey 2019-20

It is to be noted, absence of medical institutions in Mengujuma village.

2.4.4. Medical Institutions in Peren district

The number of medical institutions in Peren district is presented in Table no.2.4.4. The table shows; there is one hospital with 50 Beds, known as Civil/District Hospital in Peren Town, serving as the major healthcare provider in the district, one Community Health Centre with 12 Beds in Jalukie Town providing specialized health care services, 9 Primary Health Centre (PHC), comprising of 54 Bed, and 16 Subcentres providing basic healthcare to the local population and surrounding areas. Medical practitioners comprising of 11 Doctor General, 6 Doctor specialist, 1 Nursing sister, 10 staff nurse, 39 ANM and 16 pharmacists.

The table shows, in Rural Peren as per the study, there is one Subcentre and one Primary Health Centre (6 Beds). Medical practitioners comprising of 2 Doctor Generals, 2 ANM, 2 FHW and 2 pharmacists. Subcentre is in Samzuiram village with medical practitioners comprising of one Doctor General, 1 ANM, 1 FHW and 1 pharmacist, and Primary Health Centre (PHC) in New Poilwa village with medical practitioners comprising of one Doctor General, one ANM, one FHW, and, one pharmacist.

The table shows, in Peren Urban represented by Midland and Stadium colony; there was no medical institutions. It indicated, absence of medical institutions in Peren Urban (study sample). It is to be noted, absence of medical institution in Midland colony and Stadium colony.

Table no.2.4.4: Number of medical institutions and practitioners in Peren district

Sl. No	Particular	Peren	Rural	Samzuiram	New Poilwa
1	District Hospital	1	-	-	-
2.	Number of Bed	50	-	-	-
3.	Community Health Centre	1	-	-	-
4.	Number of Bed	12	-	-	-
5.	Primary Health Centre	9	1	-	1
6.	Number of Bed	54	6	-	6
7.	Sub Centre	16	1	1	-
8.	Doctors General	11	2	1	1
9.	Doctors Specialist	6	-	-	-
10.	Nursing sister	1	-	-	-
11.	Staff Nurse	10	1		-
12.	ANM/FHW	39	4	2	2
13.	Pharmacist	16	2	1	1

Source: Directorate of Health and Family welfare & Field Survey 2019-20

2.5.1. Health Deprivation in Nagaland

In order to examine health deprivation in Nagaland; Nutrition and Child Mortality were the two indicators used under the study. It was observed; absence of deprivation in both the indicators i.e., nutrition and child mortality. It indicated; there was no deprivation in health dimension. It means, no any member of the households in Nagaland was found to be malnourished nor there was loss of any child during the last five years prior to the study. It is a reflection of positive parameter.

2.6. STANDARD OF LIVING

In-order to understand the standard of living of the people of Nagaland, it becomes necessary to analyzed housing amenities and to examine the deprivation face by the people of Nagaland. This section covers housing amenities as i. Electricity- Because Electrification is one of the factors which shows how developed a state is. Electricity is crucial for industries to work, function and develop, without electricity it is not possible for any state to progress. Electricity in a way reflects the standard of living of the people, ii. Sanitation-Safe sanitation is one of the basics necessities of a healthy hygiene. “Households which lack proper sanitation facilities have an adverse impact

on health such as diarrhoea, cholera, stunning, anaemia, vector-borne diseases etc. than households with improved sanitation facilities that are not shared with other households" (Yamakoshi et al., 2020, p. 21). It was also reported by NE Water Talk that; there has been a "decline in proper sanitation condition. Though, Govt. of India had come up with scheme such as Swachh Bharat Mission for improving sanitation and hygiene facilities, it has not been able to do so as it had been blocked by insufficient funds and bureaucratic inefficiencies, and because of which "many communities still lack basic sanitation facilities". iii. Drinking water- "Nagaland lack access to safe, clean drinking water which has perilous effect on the health of the people, especially the elderly and children as this section of the population are more susceptible to waterborne diseases" (*Water News September 2024: Nagaland | NE Water Talk*, n.d.). There is also lack to clean drinking water and sanitation causing a challenge as well as concern (Nagaland Post, September 21 2023 Healthcare Landscape in Nagaland: Challenges and Progress). iv. Cooking fuel- cooking fuel as an indicator can be used for determining living condition as well as "within household air pollution".

2.6.1. Housing Amenities Information of Nagaland

Housing amenities comprising of i. electricity, ii. clean and safe drinking water, iii. sanitation, iv. housing, v. assets and vi. cooking fuel, information is presented as follows.

Electricity

In Nagaland as per census 2011; 82% of households use electricity for lighting, 16% of households use kerosene for lighting, 2% of households use any other source for lighting, and 1% of households has no lighting facilities. But in 2019-21, according to NFHS-5 almost all households i.e., 99% of the households have electricity connection.

In Rural, as per Census 2011; 75.22% of households used electricity for lighting, 21% of the households use kerosene for lighting, 2% of the households use any other source for lighting, and 2% of the households has no lighting facilities. In Urban, 81.6% of households used electricity for lighting, 5% of households used kerosene, 0.3% of the households use any other source for lighting, and 0.2% has no lighting facilities. It was also reported, 70% of the villages were electrified as per Central Electricity Authority,

2013. In 2005, Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) was implemented to provide access to electricity for all rural and BPL households/families.

Water

In Nagaland according to NFHS-5; about 89% of households have basic drinking water service, 91% of households use an improved source of drinking water, but only 46% of households have water piped into their dwelling and 95% of households use proper water treatment method to make water drinkable mostly by boiling. It was also reported, 81.7% of the households have access to water on their premises/dwellings, 15% of the households take less than 30 minutes to fetch water and 3.1% of the households takes 30 minutes or longer to fetch water.

In Rural, according to NFHS-5; 87.6% of the households have basic drinking water service, 43% of households have water piped into their dwelling, 76.6% of the households have water on their premises, 19% of the households have water less than 30 minutes of their dwellings, and, 4.2% of the households takes thirty minutes or longer to fetch water. In Urban areas; 92.8% of households have basic drinking water service, 52% of households have water piped into their dwelling, 92.4% of the households have water on their premises, 6.5% of the households have water less than 30 minutes of their dwellings, and, 6.5% of the households takes thirty minutes or longer to fetch water in their dwellings.

Sanitation

In Nagaland, according to NFHS-5; less than 1 % of households do not have toilet facility, they use open spaces or fields. However, 87 % of households have basic sanitation service (i.e., use of improved facilities not shared with other households). It was reported, 4% of the household use unimproved facility, 8.6% use shared facility and 99.7% of the households have access to toilet facility.

In Rural, according to NHFS-5; 89.6% of the households have access to improved, not shared facility, 4.8% of the households have access to shared facility, 5.1% of the households use unimproved facility, 0.5% of the households have no facility and use open spaces or field for defecation, 89.65% of the households have access to basic sanitation service and, 99.5% of the households have access to toilet facility.

In Urban areas, 81.5 % of the households have access to improved facility, 16.5% of the households use shared facility, 1.7% of the households use unimproved facility, and 0.3% of the households have no facility and use open spaces or field for defecation, 81.5% of the households have access to basic sanitation service, and, 99.9% of the households in Urban areas have access to toilet facility.

Housing

In Nagaland, as per NFHS-5; about 34% of the households live in a pucca house, 8% of the households live in kutcha house and about 34% of the households live in semi-pucca house.

In Rural; 10.4% of the households live in kutcha house, 22.2% of the households lives in pucca house and 66.8% of the households live in semi-pucca house, and in Urban areas; 2.9% of the households live in kutcha house, 57.1 % of the households live in pucca house and 39.8% of the households live in semi-pucca house.

Assets

In Nagaland, according to NFHS-5; about 58% of the total households possessed or owns TV, 12% of the households owns radio, 94% of the households owns mobile, 55% of the households have internet connection, 13% of the households owns computer, 26% of the households owns refrigerator, 5.5% of the households owns bicycle, 17% of the households owns motorcycle or scooter, 21% of the households owns car. It is also reported, 7.78% of the family in Nagaland owned car, while 6.32% of the households owned two -wheeler.

In Rural according to NFHS-5; 86% of rural households owns a house, most households i.e., about 93% of the households have mobile phone, 13% of the households possess or owns radio or transistor, 48.6% of households owns TV, 44.2% use internet, 6.7% of households owns computer, 17% of households owns refrigerator, 4.6% of households owns bicycle, 14.3% of households owns motorcycle or scooter, 16.1% of households owns car. In Urban, 55% of households owns a house, almost all households i.e., approximately 98% of households have mobile phone, 8.2% of households owns radio or transistor, 79% of households owns TV, 77.5% of households owns internet, 25.5% of households owns computer, 46.2% of households

owns refrigerator, 7.6% of households owns bicycle, 21.7% of households owns motorcycle or scooter and 32.1% of households owns car.

Cooking fuel

In Nagaland according to NFHS-5 (2019-21); about 43% of the households use a clean fuel for cooking. It was reported, about 3% of the households use electricity for cooking, approximately about 40% of households use LPG for cooking, 0.2% of the household use kerosene and about 57% of the households use wood for cooking. According to Central Electricity Authority (2013); only 7% of the Nagaland households have access to modern and relatively clean source of energy for cooking and heating requirement, whereas, approximately 93% of the population depend on firewood and other source of energy for cooking and heating requirement.

In Rural areas according to NFHS-5; 2.1% of the households use electricity, 22.2% of the households use LPG, 0.1% of the households use kerosene, 74.7% of the households use wood as cooking fuel. It was reported, 24.9% of the households use clean fuel for cooking. In Urban areas; 4.1% of the households use electricity, 75.7% use LPG, 0.5% use kerosene and 18.2% use wood as cooking fuel. It was also reported, 81.1% of the households use clean fuel for cooking. This clearly depicts that in Nagaland, used of clean cooking source was low and poor.

Housing Amenities Information of Nagaland is presented in Table no.2.6.1. The table shows, approximately 96% of the households in Nagaland have electricity for domestic use, about 96% of the household in Rural have electricity for domestic use and 98% of the household in Urban have electricity for domestic use.

In terms of sanitation, in Nagaland; 100% of the households have access to toilet and 98% of the people lived in households with improved toilet, which was found to be higher in percent than Rural areas where 97.2% of the of the people live in households with improved toilet. In Urban; 99.8% of the people live in household with improved toilet. It was observed from the table, 100% of the household have access to toilet in Rural and 99.8% of the households in Urban have access to toilet.

In terms of drinking water, the table shows, 72% of the household in Nagaland have drinking water facilities within the household premise, approximately 30% of the

households does not have sufficient drinking water throughout the year from the main source of drinking water, 40% of the households have access to water within their dwellings, and 28% of the households have access to pipe water into their dwellings. In Rural, approximately 65% of the households and approximately 88% of the households in Urban have drinking water facilities within the household premise. It was observed, approximately 27% of the households in Rural and 37% of the households in Urban does not have sufficient drinking water throughout the year from the main source of drinking water. In Rural; 32% of the households and 58% of the households in Urban have access to drinking water within their dwellings. The table shows, 22% of the households in Rural and approximately 41% of the households in Urban have pipe water connection in their dwellings.

It was observed from the table that, 84% of the households in Nagaland, in Rural; 90% of the households and in Urban; 60% of the households lived in their owned dwellings and 14% of the households in Nagaland, 3% of the households in Rural and 38% of the people in Urban lived in hired dwellings. In Nagaland; approximately 63% of the households live in pucca house, 17% of the households live in kutcha house, and 20% of the households live in semi pucca house. In Rural; approximately 58% of the household and 74% of the households from Urban live in pucca house, and approximately 23% of the households in Rural and approximately 5% of the households in Urban live in kutcha house. It was also observed, approximately 20% of the households in Rural and approximately 21% of the households in Urban live in semi pucca house.

The table also shows, approximately 51% of the households in Nagaland used LPG, 48% of the household's used firewood and 0.3% of the household use kerosene for cooking as cooking fuel. The table shows, approximately 38% of the households in Rural and 78% of the household in Urban used LPG as cooking fuel to cook food. It was also observed, in Rural; 61% of the population used firewood as fuel for cooking and no households use kerosene for cooking whereas, in Urban; 20% of the people use firewood as their fuel for cooking and about 0.8% use kerosene for cooking.

Table no.2.6.1: Housing Amenities Information of Nagaland

Particular	Nagaland	Rural	Urban
Household having electricity for domestic use	96.4%	95.5%	98.4%
Households using improved toilet	98.0%	97.2%	99.8%
Households access to toilet	100%	100%	99.8%
Households without having access to toilet	0%	0%	0.2%
Households having drinking water facilities within the household premise	72.1%	64.7%	87.8%
Not having sufficient drinking water throughout the year from the main source of drinking water	29.9%	26.7%	36.7%
Access to water within dwellings	40.2%	31.9%	58.0%
Piped water into dwelling	28%	22.0%	40.9%
Households with owned dwellings	80.6%	90.1%	60.1%
Households with hired dwellings	13.6%	2.5%	37.7%
Households living in Pucca dwelling unit	62.8%	57.5%	74.3%
Household living in Kutcha dwelling unit	17.1%	22.8%	4.9%
Semi Pucca	20.1%	19.8%	20.8%
LPG	50.7%	37.8%	78.1%
Firewood, chips and crop residue	48.3%	61.4%	20.2%
Kerosene	0.3%	0.0%	0.8%

Source: NSS 76 Round

2.6.2. Housing Amenities Information of Kohima and Peren district

Housing amenities comprising of i. electricity, ii. clean and safe drinking water, iii. sanitation, iv. housing, v. assets and vi. cooking fuel, information is presented as follows.

Electricity

In Kohima district according to Census 2011, out of 26,421 households approximately 96% of the households were electrified (i.e., 25,339 households) and 4% of the households were unelectrified (i.e., 1,082 households) whereas, in Peren district, out of 15,850 households approximately 73% of the households were electrified (i.e., 11,506 households) and 27% of the households were unelectrified (i.e., 4,344 households).

Water

In Kohima district according to the Status of Functional Tap Connection in Nagaland; out of 30362 households, 21871 households were provided FHTC, and 25671

households were provided FHTC under Rural Water Supply, Jal Jeevan Mission (JJM). In Peren district according to the Status of Functional Tap Connection; out of 19949 households, 16791 households were provided FHTC.

Sanitation

In Kohima district according to NFHS-5 (2019-21); 99.6% which is approximately 100% of households have access to toilet facility and in Peren district; 99.8% which is also approximately 100% of households have access to toilet facility.

Housing

In Kohima district according to 2011 Census, a total of 19 families which is about 100 people, live on footpath or without any roof cover, and, in Peren district; a total of 5 families i.e., about 31 people, live on footpath or without any room cover.

Assets

In Kohima district according to the report of the Central Electrical Authority (2013), out of 26,421 households; 11,400 households' own radio/transistors, 9,810 households own televisions, 247 household's own computer/laptop with internet and 1,376 households owns computer/laptop without internet and 14,497 households owns mobile handset. In Peren district, out of 15,850 households; 2,716 households' own radio/transistors, 2,895 households' own television, 54 household's own computer/laptop with internet, 802 household's own computer/laptop without internet and 5,147 households owns mobile handset.

Housing Amenities Information of the two districts; Kohima and Peren are presented in Table no.2.6.2. The table shows, in terms of electricity; in Kohima district; approximately 100% of the population live in household with electricity connection and in Peren district; 98% of the population lives in household with electricity connection.

In terms of drinking water, in Kohima district; approximately 90% of the population were living in households with improved drinking water source. In Peren district; approximately 93% of the people were living in household with improved drinking water. Because of Jal Jeevan Mission, approximately 81% of the households in Kohima

district were provided with Functional Household Tap Connection and 84% of the household were provide Functional Household Tap Connection in Peren district.

In terms of sanitation, in Kohima district; 87% of the population were living in households that used improved sanitation facility and in Peren district; 89% of the people lived in household that have access to improved sanitation.

In terms of cooking fuel, in Kohima district; approximately 62% of the population were living in households that used clean cooking fuel whereas, and in Peren district; 31% of the households used clean cooking fuel for cooking.

Table no.2.6.2: Housing Amenities information of Kohima and Peren districts.

Particulars	Kohima	Peren
	Percentage of Population	
Households with electricity	99.5%	98.2%
Improved drinking water source	89.9%	92.5%
Improved sanitation facility	87.4%	89.4%
Clean cooking fuel	61.7%	31.4%
FHTC coverage	80.47%	84.61%

Source: NFHS-5 (2019-20) & Nagaland Economic Survey2023-24

It is to be noted that housing amenities information relating to the study area particular Kohima Rural, Peren Rural, Kohima Urban and Peren Urban as secondary data was not available.

2.7.1. Standard of living Deprivation of Nagaland

Standard of living deprivation of Nagaland is presented in Table no.2.7.1. The table shows; the least contribution in deprivation was observed in indicator water (1%) and the highest contribution in deprivation was observed in indicators sanitation and housing, both with similar percentage of deprivation (15% each respectively). In Rural; the least contribution in deprivation was observed in indicator water (1%) and the highest contribution in deprivation was observed in indicators sanitation and housing, with similar percentage of deprivation (15% each respectively). In Urban, the least contribution in deprivation was observed in indicator water (1%) and the highest contribution in deprivation was observed in indicators housing and assets, with similar percentage of deprivation (16% each, respectively). In Kohima district; the least

contribution in deprivation was observed in indicator water (2%) and the highest contribution in deprivation was observed in indicators sanitation and housing, with similar percentage of deprivation (15% each respectively). In Peren district; the least contribution in deprivation was observed in indicator water (1%) and the highest contribution in deprivation was observed in indicators sanitation and housing, with similar percentage of deprivation (15% each respectively).

In term of water deprivation, it was observed from the table; Nagaland, Rural, Urban and Peren district contributed similar percentage of deprivation (i.e., approximately 1%, each respectively), whereas for Kohima district it was 2%. It indicated, 1% of the households in Nagaland, Rural, Urban and Peren district does not have access to safe, and clean drinking water, and in Kohima district; 2% of the households does not have access to safe drinking water.

The table shows, in deprivation of sanitation; Nagaland, Rural, Kohima district and Peren district contributed similar percentage of deprivation (15% each, respectively) and Urban (14%). It indicated, 15% of the households in Nagaland, Rural, Kohima district and Peren district do not have access to improved sanitation and in Urban; 14% of the household does not have access to improved sanitation.

The table shows, in deprivation of housing; Nagaland, Rural, Kohima district and Peren district contributed similar percentage of deprivation (15% each, respectively) and in Urban (16%). It indicated, 15% of the households in Nagaland, Rural, Kohima district and Peren district does not have access to proper housing and in Urban; 16% of the population does not have access to proper housing.

The table shows, in deprivation assets; Nagaland and Peren district with similar percentage of deprivation (approximately 14% each respectively), Rural and Kohima district with similar percentage of deprivation (13% each respectively) and Urban (16%). It indicated, 14% of the households in Nagaland and Peren district, 13% of household in Rural and Kohima district and 16% of households in Urban does not own assets.

The table shows, in deprivation of cooking fuel, both Nagaland and Peren district contributed; 9%, Rural; 10%, Kohima district; 8% and Urban; 6%. It indicated, 9% of

the household in Nagaland and Peren district, 10% of the household in Rural, 8% of the household in Kohima district and 6% of the household in Urban does not have access to clean cooking fuel.

Table no.2.7.1: Standard of Living Deprivation of Nagaland

Indicators → Area ↓	Water	Sanitation	Housing	Assets	Cooking fuel
Nagaland	1.08%	14.71%	15.39%	13.76%	9.15%
Rural	1.14%	15.01%	15.24%	13.12%	10.03%
Urban	0.88%	13.70%	15.60%	15.90%	6.18%
Kohima	1.97%	15.48%	15.48%	12.53%	8.36%
Peren	0.98%	14.63%	15.38%	13.90%	9.25%

Source: Field survey 2019-2020

2.7.2. Standard of living Deprivation of Kohima district

Standard of Living deprivation of Kohima district is presented in Table no.2.7.2. The table showed the least deprivation contributed as indicator water, and the highest deprivation contributed was indicator sanitation and housing. In terms of indicator water deprivation; Kohima Rural does not contribute to the deprivation whereas, Kohima Urban contributed 5% of deprivation. It indicated that, 5% of the households in Kohima Urban does not have access to safe drinking water. The table shows, 13% of the households in NHAK colony contributed to the deprivation whereas, Forest colony does not show deprivation in water. It indicated, 13% of the households in NHAK colony does not have access to safe drinking water.

In terms of deprivation in sanitation; 16% of households in Kohima Rural and 15% of the households in Kohima Urban were deprived. It indicated that, in Kohima Rural; 16% of the households does not have access to improved sanitation and 15% of the households in Kohima Urban does not have access to improved sanitation. The table shows, Kiruphema village, contributed 17% of deprivation and Mengujuma village, 15%. It indicated that, 17% of the households in Kiruphema village does not have access to improved sanitation and 15% of the households in Mengujuma village does not have access to improved sanitation. The table shows, Forest colony contributed

17% percent of deprivation and NHAK colony, 15%. It means that, 17% of the households in Forest colony does not have access to sanitation and 15% of the households in NHAK colony does not have access to improved sanitation.

The table shows, in terms of deprivation in indicator housing; 16% of households in Kohima Rural and 15% of households in Kohima Urban were deprived. It indicated that, in Kohima Rural; 16% of the households and 15% of the households in Kohima Urban does not have access to proper housing. The table shows, Kiruphema village contributed 17% of deprivation and Mengujuma village, 15%. It indicated that, 17% of the households in Kiruphema village does not have access to proper housing and 15% of the households in Mengujuma village does not have access to proper housing. The table shows, Forest colony contributed 17% percent of deprivation and NHAK colony, 13%. It means that, 17% of the households in Forest colony does not have access to proper housing and 13% of the households in NHAK colony does not have access to proper housing.

In terms of deprivation in assets; 11% of households in Kohima Rural and 15% of the households in Kohima Urban were deprived. It indicated that, 11% of the households in Kohima Rural and 15% of the households in Kohima Urban does not have ownership over assets. From the table it can be observed that, 13% of households in Kiruphema village and 10% of households in Mengujuma village were deprived in indicator assets. It means, in Kiruphema village; 13% of the household and 10% of the households in Mengujuma village does not have ownership over assets. Under Kohima Urban; 17% of the household in Forest colony and 13% of the households in NHAK colony were deprived. It indicated that, in Forest colony; 17% of the households and in NHAK colony; 13% of the households does have ownership over assets.

In terms of deprivation of cooking fuel; 11% of households in Kohima Rural and 5% of the households in Kohima Urban were deprived. It indicated that, in Kohima Rural; 11% of the households and in Kohima Urban; 5% of the households does not have access to clean cooking fuel. From the table it can be seen that, 15% of the households in Mengujuma village and 4% of the households in Kiruphema village were deprived. It means that, in Megujuma village; 15% of the households and in Kiruphema village;

4% of the households does not have access to clean cooking fuel. It was observed; 13% of the households in NHAK colony were deprived, and no deprivation in Forest colony. It indicated that, in NHAK colony; 13% of the households does not have access to clean cooking fuel.

It was also observed in the table, Kohima Rural face higher percentage of deprivation in indicator sanitation, housing and cooking fuel than Kohima Urban, and Kohima Urban face higher percentage of deprivation in indicator water and assets than Kohima Rural. Kohima Rural does not show deprivation in water.

Table no.2.7.2: Standard of Living Deprivation of Kohima district

Indicators→ Area ↓	**Water**	**Sanitation**	**Housing**	**Assets**	**Cooking fuel**
Kohima	1.97%	15.48%	15.48%	12.53%	8.36%
Rural	0%	15.77%	15.77%	10.92%	10.51%
Kiruphema	0%	16.67%	16.72%	12.78%	3.93%
Mengujuma	0%	15.11%	15.11%	9.61%	15.11%
Urban	5.01%	15.04%	15.04%	15.04%	5.01%
NHAK	12.53%	12.53%	12.53%	12.53%	12.53%
Forest	0%	16.72%	16.72%	16.72%	0%

Source: Field survey 2019-2020

2.7.3. Standard of Living Deprivation of Peren district

Standard of living deprivation of Peren district is presented in Table no.2.7.3. The table shows the least deprivation contributed as deprivation in water (1%), and the highest deprivation contributed was indicator housing (15%). The table shows, in terms of water deprivation; Peren Urban does not contribute to the deprivation whereas, Peren Rural contributed 1% of deprivation. It indicated that, 1% of the households in Peren Rural does not have access to safe drinking water.

In terms of deprivation in sanitation; 15% of households in Peren Rural and 13% of the households in Peren Urban were deprived. It indicated that, in Peren Rural; 15% of the households does not have access to improved sanitation and 13% of the households in Peren Urban does not have access to improved sanitation. The table

shows, Samzuiram village contributed 15% of deprivation and New Poilwa village, 10%. It indicated that, 15% of the households in Samzuiram village does not have access to improved sanitation and 10% of the households in New Poilwa village does not have access to improved sanitation. The table shows; Midland colony contributed 15% percent of deprivation and Stadium colony 17%. It means that, 15% of the households in Midland colony does not have access to sanitation and 17% of the households in Stadium colony does not have access to improved sanitation.

The table shows, in terms of deprivation in indicator housing; 15% of households in Peren Rural and 16% of households in Peren Urban were deprived. It indicated that, in Peren Rural; 15% of the households and 16% of the households in Peren Urban does not have access to proper housing. The table shows, Samzuiram village contributed 15% of deprivation and New Poilwa village, 13%. It indicated that, 15% of the households in Samzuiram village does not have access to proper housing and 13% of the households in New Poilwa village does not have access to proper housing. The table shows, Midland colony contributed 16% percent of deprivation and Stadium colony, 17%. It means that 16% of the households in Midland colony does not have access to proper housing and 17% of the households in Stadium colony does not have access to proper housing.

In terms of deprivation in assets; 13% of households in Peren Rural and 16% of the households in Peren Urban were deprived. It indicated that, 13% of the households in Peren Rural and 16% of the households in Peren Urban does not have ownership over assets. From the table it can be observed that, in both Samzuiram and New Poilwa village with similar percentage of deprivation; where 13% of households were deprived. It means, in both the village;13% of the household does not have ownership over assets. It was observed; 16% of the household in Midland colony and 17% of the households in Stadium colony were deprived. It indicated that, in Midland colony; 6% of the households and in Stadium colony; 17% of the households does have ownership over assets.

In terms of deprivation of cooking fuel; 10% of households in Peren Rural and 6% of the households in Peren Urban were deprived. It indicated that, in Peren Rural; 10%

of the households and in Peren Urban; 5% of the households does not have access to clean cooking fuel. From the table it can be seen that; 10% of the households in Samzuiram village and 13% of the households in New Poilwa village were deprived. It means that, in Samzuiram village; 10% of the households and in New Poilwa village; 13% of the households does not have access to clean cooking fuel. It was observed; 6% of the households in Midland colony were deprived, and no deprivation in Forest colony. It indicated that, in Stadium colony; 17% of the households does not have access to clean cooking fuel.

It was also observed in the table, Peren Rural face higher percent of deprivation in indicator water, sanitation and cooking fuel than Peren Urban. Peren Urban face higher percent of deprivation in indicator housing and assets than Peren Rural. Peren Urban does not show deprivation in water.

Table no.2.7.3: Standard of Living Deprivation of Peren district

Indicators→ Area ↓	**Water**	**Sanitation**	**Housing**	**Assets**	**Cooking fuel**
Peren	0.98%	14.63%	15.38%	13.90%	9.25%
Rural	1.24%	14.95%	15.19%	13.32%	9.99%
Samzuiram	0%	15.45%	15.45%	13.37%	9.68%
New Poilwa	12.85%	10.28%	12.85%	12.85%	12.58%
Urban	0%	13.41%	16.09%	16.09%	6.44%
Midland	0%	14.58%	16.03%	16.03%	5.54%
Stadium	0%	16.72%	16.72%	16.72%	16.71%

Source: Field survey 2019-2020

2.8.1. Status of water supply, toilet type, dwellings, assets and cooking fuel of Nagaland

The status of water supply, toilet type, dwellings, assets and cooking fuel in Nagaland is presented in Table no.2.8.1. The table shows; approximately 29% of the households have tap water connection. In Rural; 16% of the households and in Urban; 45% of the households have tap connection. The table shows, 63% of the households in Kohima district and 14% of the households in Peren district have tap water connection.

In terms of the type of toilet used; in Nagaland; 50% of the household used kutcha latrine and 42% of the households used pucca latrine. In Rural; 71% of the household use kutcha latrine, 29% of the households use pucca and 3% of the households use shared pucca, whereas in Urban; 22% of the households use kutcha, 60% of the household use pucca and 7% of the households use shared pucca. In Kohima districts; 14% of the household use kutcha latrine, 86% of the households use pucca, 4% of the household use shared kutcha and 14% of the households use shared pucca latrine, whereas, in Peren district; 65% of the household use kutcha latrine, 23% use pucca and 0.31% use shared pucca.

In terms of dwelling type, it was observed from the table that, in Nagaland; 64% of the households live in kutcha house, 18% of the household live in pucca house and with similar percentage 18% of the household live in semi pucca house. In Rural; 79% of the household live in kutcha house, 16% of the household live in pucca house and 3% of the household live in semi pucca house, whereas, in Urban; 44% of the household live in kutcha house, 21% of the household live in pucca house and 36% of the household live in semi pucca house. In Kohima districts; 34% of the household live in kutcha house, 31% of the household live in pucca house and 35% of the household live in semi pucca house, whereas, in Peren district; 77% of the household live in kutcha house, 12% of the household live in pucca and 11% of the household live in semi pucca house.

In terms of assets ownership, from the table, in Nagaland; 40% of the household own car, approximately 45% of the households owns TV and approximately 95% of the households owns mobile. In Rural; 34% of the household owns car, 32% of the households owns TV and 92% of the households owns mobile, whereas, in Urban; 49% of the households owns car, 81% of the households owns TV and 98% of the households owns mobile. In Kohima district; 59% of the household owns car, 67% of the households owns TV and 97% of the households owns mobile, whereas, in Peren district; 32% of the households owns car, 35% of the households owns TV and 73% of the households owns mobile.

In terms of cooking fuel, the table shows, in Nagaland; approximately 79% of the household use LPG as cooking fuel for cooking food. In Rural; 67% of the households use LPG as cooking fuel, which was much lower in percentage than Urban where 93% of the households use LPG as cooking fuel. In Kohima district; 91% of the household use LPG as cooking fuel which is much higher in percentage than Peren district; 73% of the household use LPG as cooking fuel.

Table no.2.8.1: Status of water supply, toilet type, dwellings, assets and cooking fuel in Nagaland

		Nagaland	**Rural**	**Urban**	**Kohima**	**Peren**
Particulars	Types	Households in percentages				
Water Supply	Tap water	28.73	16.12	45.44	63.16	13.72
Toilet	Kutcha	49.69	70.55	22.04	14.35	65.10
	Pucca	42.28	29.06	59.80	85.65	23.4
	Shared Kutcha	1.09	0	2.53	3.59	0
	Shared Pucca	4.40	3.44	5.66	13.76	0.31
Housing	Kutcha	64.04	79.41	43.67	34.09	77.10
	Pucca	18.13	16.25	20.61	31.34	12.36
	Semi-pucca	17.84	4.33	35.73	34.57	10.54
Assets	Car	40.25	34.03	48.48	59.33	31.92
	TV	44.57	32.31	60.81	67.22	34.69
	Mobile	94.81	92.48	97.89	96.77	93.95
Cooking Fuel	LPG	78.50	66.99	93.75	91.39	72.87

Source: Field Survey 2019-20

2.8.2. Status of water supply, toilet type, dwellings, assets and cooking fuel of Kohima district

The status of water supply, toilet type, dwellings, assets and cooking fuel in Kohima district is presented in Table no.2.8.2. The table shows in Kohima Rural; 36% household have tap water connection, whereas Kohima Urban; 75% households have tap water connection. It was observed, 41% of the households in Kiruphema village and 28% of the households in Mengujuma village have tap water connection, whereas, in Kohima Urban; 60 % of the households in NHAK colony and 95% of the households in Forest colony have tap water connection.

In terms of toilet types, the table shows, in Kohima Rural; 22% of the household use kutcha latrine, 58% of households use pucca latrine and 19% of households use shared pucca latrine whereas, in Kohima Urban;11% of the household use kutcha latrine, 89% of the households use pucca latrine, 5% of the households use shared kutcha and 11% of the households use shared pucca. It was observed, in Kiruphema village; 7% of the household use kutcha latrine, 93% use pucca, 34% use shared pucca latrine, whereas, in Mengujuma village; 42% of the household use kutcha latrine, and 58% of the households use pucca latrine. It was observed in NHAK colony; 12% of the household use kutcha latrine, 88% of the household use pucca latrine, 9% of the household use shared kutcha and 20% of the household use shared pucca latrine, whereas, in Forest colony, 10% of the households use kutcha latrine, and 90% of the households use pucca latrine.

In terms of dwellings, the table shows, in Kohima Rural; 19% of the household live in kutcha housing, and 52% of the household live in pucca housing, whereas, in Kohima Urban; 27% of the household live in kutcha housing, 24% of the household live in pucca housing and 49% of the household live in semi pucca housing. It was observed, in Kiruphema village; 59% of the household live in kutcha housing, and 41% of the household live in pucca housing, whereas, in Mengujuma village; 42% of the household live in kutcha housing, and 58% of the household live in pucca housing. It was observed in NHAK colony; 37% of the household live in kutcha housing, 26% of the household live in pucca housing and 37% of the household live in semi pucca housing, whereas, in Forest colony; 13% of the household live in kutcha housing, 21% of the household live in pucca housing and 65% of the household live in semi pucca housing.

In terms of assets ownership, the table shows, in Kohima Rural; 62% of the household owns car, 33% of the households owns TV and 92% of households owns mobile, whereas, in Kohima Urban; 58% of the household owns car, 82% of the households owns TV and 99% of the household owns mobile. It was observed, in Kiruphema village; 56% of the households owns car, 17% of the households owns TV and 86% of the households owns mobile, whereas, in Mengujuma village; 70% of the household own car, 5% of the households owns TV and 100% of the households owns mobile. It

was observed, in NHAK colony; 55% of the households owns car, in 96% of the households owns TV and 100% of the household owns mobile, whereas, in Forest colony; 63% of the households owns car, 64%of the households owns TV and 97% of the households owns mobile.

In terms of cooking fuel, the table shows, in Kohima Rural; 76% of the household use LPG as cooking fuel, whereas in Kohima Urban; 98% of the household use LPG as cooking fuel. It was observed, in Kiruphema village; 77% of the household and in Mengujuma village; 75% of the household use LPG as cooking fuel, whereas, in NHAK colony; 96% of the household and 100% of the household in Forest use LPG as cooking fuel.

Table no.2.8.2: Status of water supply, toilet type, dwellings, assets and cooking fuel in Kohima district

Area →		**Kohima**	**Rural**	**Kiruphema**	**Mengujuma**	**Urban**	**NHAK**	**Forest**
Particulars	Types	Households in percentages						
Water supply	Tap	63.16	35.6	41.43	28.18	74.91	59.57	94.55
Toilet	Kutcha	14.35	22.4	7.14	41.82	10.92	11.85	9.73
	Pucca	85.65	58.4	92.86	58.18	89.08	88.15	90.27
	Shared Kutcha	3.59	0	0	0	5.12	9.12	0
	Shared Pucca	13.76	19.2	34.29	19.2	11.43	20.36	0
Housing	Kutcha	34.09	51.6	59.29	51.6	26.62	37.08	13.23
	Pucca	31.34	48.4	40.71	48.4	24.06	26.14	21.40
	Semi-pucca	34.57	0	0	0	49.32	36.78	65.37
Assets	Car	59.33	62	55.71	62	58.19	54.71	62.65
	TV	67.22	33.2	17.14	33.2	81.74	95.74	63.81
	Mobile	96.77	92.4	86.43	92.4	98.63	100	96.89
Cooking fuel	LPG	91.39	76.45	77.14	76.45	97.78	96.05	100

Source: Field Survey 2019-20

2.8.3. Status of water supply, toilet type, dwellings, assets and cooking fuel of Peren district

The status of water supply, toilet type, dwellings, assets and cooking fuel in Peren district is presented in Table no.2.8.3. The table shows that; 13% of the households have tap water connection, which was higher in percent than Peren Rural but lower in percent than Peren Urban. The table shows in Peren Rural; 12% of households have tap water connection, which is lower in percent than Peren Urban (17%). It was observed, 10% of households in Samzuiram village have tap water connection, which was found to be much lower in percent than New Poilwa village (34%). It was observed; 10 % of the household in Midland colony which is much lower in percent than 29% of the households in Stadium colony, have tap water connection.

In terms of toilet types, the table shows, in Peren district; 65% of the households use kutcha latrine, 23% of households have pucca latrine and about 0.31% of households use shared pucca latrine. In Peren Rural; 80% of the household use kutcha latrine, 10% use pucca latrine and 0.45% use shared pucca latrine whereas, in Peren Urban; 33% of the household use kutcha latrine, and 31% use pucca latrine. In Samzuiram village; 83% of the household use kutcha latrine, 17% of households use pucca, and 0.51% of households use shared pucca latrine, whereas, in New Poilwa village; 55% of the household use kutcha latrine, and 45% of the household use pucca latrine. It was observed; in Midland colony 51% of the household use kutcha latrine, and 49% of the household use pucca latrine, whereas, in Stadium colony, 100% i.e., all the household use pucca latrine.

In terms of dwellings, the table shows, in Peren district; 77% of the household live in Kutcha housing, 12% of the households live in pucca housing and about 11% of households live in semi-pucca housing. In Peren Rural; 85% of the household live in kutcha housing, 10% of the household live in pucca housing, and 5% of the household live in semi pucca housing, whereas, in Peren Urban; 17% of the household live in kutcha housing, and 33% of the household live in pucca housing. In Samzuiram village; 87% of the household live in kutcha housing, 10% of the household live in pucca housing, and 3% of the household live in semi pucca housing, whereas, in New Poilwa village; 64% of the household live in kutcha housing, 12% of the household

live in pucca housing and 24% of the household live in semi pucca housing. It was obsereved, in Midland colony; 69% of the household live in kutcha housing, 11% of the household live in pucca housing and 21% of the household live in semi pucca housing, whereas, in Stadium colony; 45% of the household live in kutcha housing, 29% of the household live in pucca housing and 26% of the household live in semi pucca housing.

In terms of assets ownership, the table shows, in Peren district, 32% of the households owns car, 35% of the households owns TV, 94% of the households owns mobile. In Peren Rural; 29% of the household owns car, 32% of the households owns TV and 92% of households owns mobile, whereas, in Peren Urban; 39% of the household owns car, 40% of the households owns TV and 97% of the household owns mobile. In Samzuiram village; 30% of the households owns car, 26% of the households owns TV and 92% of households owns mobile, whereas, in New Poilwa village; 19% of the households own car, 75% of households owns TV and 93% of households own mobile. In Midland colony; 30% of the households owns car, 22% of the households owns TV and 96% of the household owns mobile, whereas, in Stadium colony, 56% of the households owns car, 72% of households owns TV and 100% owns mobile.

In terms of cooking fuel, the table shows, in Peren district; 73% of the households use LPG as cooking fuel. In Peren Rural; 65% of the household use LPG as cooking fuel, whereas in Peren Urban; 90% of the household use LPG as cooking fuel. In Samzuiram village; 67% of the household and in New Poilwa village; 52% of the household use LPG as cooking fuel, whereas, in Midland colony; 87% of the household and 95% of the household in Stadium colony use LPG as cooking fuel.

Table no.2.8.3: Status of water supply, toilet type, dwellings, assets and cooking fuel in Peren district

Area →		**Peren**	**Rural**	**Samzuiram**	**New Poilwa**	**Urban**	**Midland**	**Stadium**
Particulars	Types	Households in percentage						
Water supply	Tap	13.72	12.43	9.60	34.21	16.56	9.66	28.84
Toilet	Kutcha	65.10	79.68	82.86	55.26	32.94	51.44	0
	Pucca	23.4	19.86	16.62	44.74	31.10	48.56	100

	Shared Kutcha	0	0	0	0	0	0	0
	Shared Pucca	0.31	0.45	0.51	0	0	0	0
Housing	Kutcha	77.10	84.69	87.40	63.82	60.37	68.93	45.12
	Pucca	12.36	10.16	9.94	11.84	17.22	10.70	28.84
	Semi-pucca	10.54	5.16	2.66	24.34	22.41	20.37	26.05
Assets	Car	31.92	28.73	29.99	19.08	38.96	29.50	55.81
	TV	34.69	32.15	26.22	77.63	40.30	22.45	72.09
	Mobile	93.95	92.49	92.37	93.42	97.16	95.56	100
Cooking fuel	LPG	72.87	65.20	66.92	51.97	89.80	86.68	95.35

Source: Field Survey 2019-20

Thus, in terms of standard of living deprivation with regard to the six indicators under study. It was found that; in Nagaland all the households were electrified. In terms of indicator water as deprivation, it was observed that in Nagaland, Rural and in Urban areas; 1% of the households were deprived. It was observed that, in Nagaland; 29% of the households have tap water connection within their dwellings, whereas, in Rural, only 16% of the households have tap water connection within their dwelling, which was lower in percent than the Urban areas; 54% of the households have tap water connection within their dwellings. In Kohima district; 2% of the households does not have access to safe drinking water, which was higher in percentage than Peren district (1%) and the state as a whole. It was observed in Kohima district; 63% of the households have tap water connection within their dwellings which was found to be much higher in percent than Peren district of 14%. Water deprivation was not observed in Kohima Rural, and 35% of the households have tap water connection within their dwellings. In Kiruphema village; 41% of the households had tap water connection which was found to be much higher in percent than Mengujuma village of 28%. In Kohima Urban; 2% of the households do not have access to safe drinking water whereas, in Peren Urban; no households were deprived. In Kohima Urban; 74% of the households have tap water connection within their dwellings, which was found to be much higher in percent than Peren Urban of 17%. Under Peren Rural, only New Poilwa village shows deprivation of 13%. It was observed that, 13% of the households in Peren Rural have tap water connection within their dwelling. In Samzuiram village; 10% of

the households have tap water connection and for New Poilwa village it was 34%. Under Kohima Urban; only NHAK colony shows deprivation of 13%, and 60% of the households have tap water connection whereas for Forest colony; 95% of the households have tap water connections. It was observed that, in Peren Urban, 17% of the households, in Midland colony; 10% of the households and in Stadium colony; 29% of the households have tap water connection within their dwellings.

In terms of indicator sanitation; 15% of households in Nagaland does not have access to improved sanitation, sharing similar percentage of deprivation with Rural, Kohima district and Peren district (15% each respectively), and in Urban; 14% of the households does not have improved sanitation. It can be seen; Urban percent of deprivation was marginally higher than Rural. It was observed in Nagaland; 43% of the households use pucca latrine which was higher in percent than Rural (29%) and Peren district (23%), respectively. In Kohima district; 86% of the households use pucca latrine which was much higher in percentage than Urban (60%), followed by Nagaland (43%), Rural (29%), and Peren district (23%), respectively. In Kohima Rural; 16% of the households, which was found to be marginally higher than Peren Rural (15%) does not have access to improved sanitation. In Kohima Urban; 14% of the households which was found to be marginally higher than Peren Urban (13%) does not have access to improved sanitation. Under Kohima Rural, in Kiruphema village about 17% of the households does not have improved sanitation, which was found to be higher in deprivation than Mengujuma village (15%). Under Peren Rural, in Samzuiram village; 15% of the households does not have access to improved sanitation, which was found to be higher in deprivation than New Poilwa village (10%). Under Kohima Urban, in Forest colony; 17% of the households does not have access to improved sanitation which was found to be higher in deprivation than NHAK colony (13%). Under Peren urban, in Midland colony; 15% of the households does not have improved sanitation, and no deprivation was observed in Stadium colony. It was observed that in Kohima Rural; 58% of the households, in Kiruphema village; 93% of the households, in Mengujuma village; 58% of the households, Kohima Urban; 89% of the household, NHAK colony; 88% of the households, Forest colony; 90% of the households, Peren Rural; 20% of the households, Samzuiram village; 17% of the households, New

Poilwa village; 45%, Peren Urban; 31% of the households, Midland colony; 49% of the households and in Stadium colony; 100% of the households use pucca latrine.

In terms of indicator housing; 15% of the households in Nagaland does not have access to proper housing to live, sharing similar percentage of deprivation of 15% each respectively by Rural areas, both Kohima and Peren district, which was found to be marginally lower in deprivation than Urban (16%). It can be seen; Urban percent of deprivation was marginally higher than Rural. It was observed, in Nagaland; 18% of the households live in pucca housing, which was higher in percent than Rural (16%), and Peren district (12%), respectively. In Kohima district; 31% of the households live in pucca housing, which was found to be higher in percent than Urban (21%). In Kohima Rural; 16% of the households which was observed to be marginally higher than Peren Rural (15%) does not have access to proper housing. In Kohima Urban; 15% of the households and 16% of households in Peren Urban do not have access to proper housing. Under Kohima Rural, in Kiruphema village; 17% of the households does not have proper housing, which was found to be higher in deprivation than Mengujuma village (15%). Under Peren Rural, in Samzuiram village; 15% of the households does not have access to proper housing, which was found to be higher in deprivation than New Poilwa village (13%). Under Kohima Urban, in Forest colony; 17% of the households does not have access to proper housing, which was found to be higher in deprivation than NHAK colony (13%). Under Peren Urban, in Stadium colony; 17% of the households does not have proper housing, which was found to be higher in deprivation than Midland colony (16%). It was observed, in Kohima Rural; 48% of the households, in Kiruphema village; 41% of the households, in Mengujuma village; 48% of the households, Kohima Urban; 24% of the household, NHAK colony; 36% of the households, Forest colony; 21% of the households, Peren Rural; 10% of the households, Samzuiram village; 10% of the households, New Poilwa village; 11%, Peren Urban; 17% of the households, Midland colony; 11% of the households and in Stadium colony; 29% of the households lives in pucca housing.

In terms of indicator assets; 14% of households in Nagaland does not have ownership over the assets, in Rural; 13% of the households and in Urban; 16% of the households does not have ownership over the assets. It can be seen; Urban percent of deprivation

was higher than Rural. In Kohima district; 13% of the households and in Peren district; 14% of the households does not have ownership to the assets. It can be seen; Peren district percent of deprivation was higher than Kohima district. In Kohima Rural; 11% of the households and 13% of households in Peren Rural do not have ownership of assets. In Kohima Urban; 15% of the households and 16% of households in Peren Urban do not have ownership of assets. Under Kohima Rural, in Kiruphema village; 13% of the households does not have ownership over assets, which was found to be higher in deprivation than Mengujuma village (10%). Under Peren Rural, both Samzuiram village and New Poilwa village with 13% of the households who does not have ownership over the assets. Under Kohima Urban, in Forest colony; 17% of the households does have ownership over the assets, which was found to be higher in deprivation than NHAK colony (13%). Under Peren Urban, in Stadium colony; 17% of the households were deprived in assets, which was found to be higher in deprivation than Midland colony (16%).

In terms of the indicator cooking fuel; 9% of the households in Nagaland does not have access to clean cooking fuel, in Rural; 10% of the households and in Urban; 6% of the households does not have access to clean cooking fuel. It can be seen, Rural has higher percent of deprivation than Urban. In Kohima district; 8% of the households and in Peren district; 9% of the households does not have access to clean cooking fuel. It can be seen; Peren district percent of deprivation was found to be higher than Kohima district. It was observed in Nagaland; 79% of the households use LPG as cooking fuel, which was found to be higher in percent than Rural (67%), and Peren district (73%), respectively. It was observed, in Urban; 93% of the households use LPG as cooking fuel, which was found to be higher in percent than Kohima district (91%). In Kohima Rural; 11% of the households and 10% of households in Peren Rural do not have access to clean cooking fuel. In Kohima Urban; 5% of the households and 6% of the households in Peren Urban do not have access to clean cooking fuel. Under Kohima Rural, in Village Mengujuma; 15% of the households does not have access to clean cooking fuel which was found to be higher in deprivation than Kiruphema village (4%). Under Peren Rural, in New Poilwa village; 13% of the households does not have access to clean cooking fuel which was found to be higher in deprivation than

Samzuiram village (10%). Under Kohima Urban, 17% of the households in NHAK colony does not have access to clean cooking fuel, and no deprivation was observed in Forest colony. Under Peren Urban, in Stadium colony; 17% of the households does not have access to clean cooking fuel which was found to be higher in deprivation than Midland colony (6%). It was observed, in Kohima Rural; 76% of the households, in Kiruphema village; 77% of the households, in Mengujuma village; 76% of the households, Kohima Urban; 98% of the household, NHAK colony; 96% of the households, Forest colony; 100% of the households, Peren Rural; 65% of the households, Samzuiram village; 67% of the households, New Poilwa village; 52% of the households, Peren Urban; 90% of the households, Midland colony; 87% of the households and in Stadium colony; 95% of the households use LPG as cooking fuel.

CHAPTER 3

ASSESMENT OF POVERTY IN NAGALAND THROUGH MULTIDIMENSIONAL POVERTY INDEX (MPI)

This chapter attempted to analyzed the multidimensional aspects of poverty in Nagaland using Alkire and Foster Methodology. Three dimension and 10 indicators were used for the analyses. MPI of Nagaland was constructed and its various components were studied to understand the severity of deprivation encountered in each indicator. The relation between various income group and MPI poor were studied. For the study five income groups were selected- BPL, Lower-income, Middle-income, Upper Middle-income and Rich income group. For the BPL; income range was taken from ₹0-₹5,000, for Lower income group; income range was from ₹5,000-₹25,000, for Upper Middle-income group; income range was from ₹50,000-₹124,000 and for the Rich income group; income range was from ₹124,000-any. The percentage contribution of various income group to MPI were also analyzed, and the percentage deprivation of the indicators to various income groups were also examined.

3.1.1. MPI of Nagaland:

The results of the censored headcount ratio and the percentage contributions of deprivations to MPI is shown in table no.3.1.1. From the table it can be observed that, 22% of the population in Nagaland are multidimensionally poor as represented by multidimensional headcount ratio (***H***). The intensity of deprivation as shown by ***A*** was found to be 36%. In other words, poor people on an average are unable to have access to 36% of the weighted indicators. The MPI value for Nagaland was found to be 8%. Among the various indicators, it can be seen, years of schooling (46%) contributed the highest percent of deprivation to MPI, followed by housing and sanitation with similar percentage of deprivation (15%), assets (14%), cooking fuel (9%) and water (1%), respectively. The result also showed that Health dimension was better off in the state as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension.

Table no. 3.1.1: MPI of Nagaland

Nagaland			
Dimensions	**Indicators**	**CHR**	**%**
Education	Schooling	0.222	45.90%
	Attendance	0.000	0%
Health	Nutrition	0.000	0%
	Mortality	0.000	0%
Living Standards	Electricity	0.000	0%
	Water	0.016	1.08%
	Sanitation	0.212	14.71%
	Housing	0.212	15.39%
	Assets	0.222	13.76%
	Cooking Fuel	0.199	9.15%
MPI		**8.1%**	
H		**22.4%**	
A		**36.09%**	

Source: Field survey 2019-20

Note i. CHR- Censored Headcount Ratio

ii. The lower MPI values represents better and lower multidimensional poverty

3.1.2. MPI of Rural and Urban

The MPI of Rural and Urban areas of Nagaland is presented in Table no.3.1.2. From the table it can be observed that, 30% of the rural population in the state Nagaland are multidimensionally poor as represented by multidimensional headcount ratio (***H)*** which was higher than the overall multidimensional headcount ratio and Urban multidimensional headcount ratio. The intensity of deprivation was marginally higher in Rural areas (36%) as compared to Urban areas (35%). Rural areas shared almost the same intensity of deprivation as the overall state. The MPI value of Rural comes out to be 11%. The contribution of different indicators to MPI was almost the same as that of the overall state MPI with zero deprivation in health indicators. For the urban areas, the headcount ratio was found to be lower than the overall ***H*** and Rural areas ***H*** with 12% of the population who are multidimensional poor. However, the intensity of deprivation was slightly lower than the overall ***A*** and Rural ***A*** with 35%, showing that poor people are unable to have access to 35% of the weighted indicators. The MPI value in the Urban comes out to be 4% which was lower than the overall state 8% and Rural 11%, which is an indication that multidimensional poverty is concentrated more in Rural as compared to the state and Urban, since the MPI value of Rural is higher

than Urban and the state. The contribution of different indicators to MPI are marginally higher than the overall state and Rural areas in indicators years of schooling, housing and assets.

As shown in the table, the multidimensional headcount ratio of Rural areas (30%) is much higher in percentage as compared to Urban areas (12%). It means, people of Rural areas have higher percent of multidimensional poor than Urban areas. In terms of intensity of deprivation, ***A***, Rural experienced 36% of deprivation which is marginally higher in percentage as compared to the Urban areas who experienced 35% of deprivation. It indicated, the poor people in Rural areas are unable to have access to about 36% of the weighted indicators whereas, Urban poor persons are unable to have access to about 35% of the weighted indicators. The highest contributing indicator to MPI in Rural areas were indicators years of schooling (45%), followed by sanitation and housing with similar percentage of deprivation (15% each respectively), assets (13%), cooking fuel (10%) and water (1%), respectively.

For the Urban, the highest contributing indicators were years of schooling (47%), followed by housing and assets with similar percentage of deprivation (16%), sanitation (14%), cooking fuel (6%) and water (1%), respectively. In terms of indicators years of schooling; Urban deprivation was higher in percentage than Rural. In terms of water deprivation, both the areas have similar percentage of deprivation approximately 1%. In terms of sanitation deprivation, Rural deprivation was higher in percentage than Urban. In term of housing and assets deprivation, Urban have higher percentage of deprivation than Rural. In term of cooking fuel deprivation, Rural have higher percentage of deprivation than Urban.

Table no. 3.1.2: MPI of Rural and Urban

Areas					
Dimensions	**Indicators**	**Rural**		**Urban**	
		CHR	**%**	**CHR**	**%**

Education	Schooling	0.298	45.45%	0.122	47.43%
	Attendance	0.000	0%	0.000	0%
Health	Nutrition	0.000	0%	0.000	0%
	Mortality	0.000	0%	0.000	0%
Living	Electricity	0.000	0%	0.000	0%
Standards	Water	0.022	1.14%	0.007	0.88%
	Sanitation	0.294	15.01%	0.105	13.70%
	Housing	0.298	15.24%	0.122	15.90%
	Assets	0.257	13.12%	0.122	15.90%
	Cooking Fuel	0.196	10.03%	0.047	6.18%
MPI		**11%**		**4.3%**	
H		**30.15%**		**12.16%**	
A		**36.35%**		**35.21%**	

Source: Field Survey 2019-20

Thus, it is observed that the MPI value of Rural (11%) is higher than Urban (4%). From the MPI value itself, we can easily identify that the multidimensional poor are concentrated more in Rural areas as compared to Urban areas since the MPI value of Rural was higher than Urban. This is also substantiated by the multidimensional headcount ratio (**H**); where for Rural it is 30% and for Urban it is 12%. It clearly indicated that, in Rural areas; 30% of the households are multidimensional poor or confined to multidimensional poverty, which is double times higher in percentage than Urban areas, where 12% of the households are multidimensional poor. Thus, there is a significant difference in multidimensional poverty between Rural and Urban areas. Hence the 1st Hypothesis is being proved.

3.1.3. MPI of Kohima district:

The results of the censored headcount ratio and the percentage contributions of deprivations to MPI of Kohima district is shown in Table no.3.1.3. From the table it can be observed, approximately 8% of the population were multidimensionally poor as represented by multidimensional headcount ratio ***(H***). The intensity of deprivation as shown by ***A*** for Kohima district as 36%. In other words, poor people in Kohima district on an average are unable to have access to 36% of the weighted indicators. The MPI value was observed to be 3%. Among the various indicators, it can be seen; years of schooling contributed highest percent of deprivation (46%) to MPI, followed by sanitation and housing, with similar percent of deprivation (15%), assets (13%),

cooking fuel (8%) and water (2%), respectively. The result also showed that Health dimension to be better off in the district, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in the Kohima district.

In Kohima Rural; approximately 16% of the population were multidimensionally poor (**H**). The intensity of poverty ***A*** as 36%, which indicated multidimensional poor in Kohima Rural were on an average deprived in 36% of its weighted indicators. The MPI value was observed to be 6%, which was higher than the district itself (3%) and Kohima Urban (2%). The MPI value indicated that, multidimensional poverty was concentrated more in Kohima Rural, followed by the district itself and Kohima Urban. Among the various indicator, it can be seen; years of schooling contributed the highest percent of deprivation (47%) to MPI, followed by sanitation and housing with similar percentage of deprivation (16%), and indicator assets and cooking fuel, with similar percent of deprivation (11%), respectively. In Kohima Rural, no deprivation in indicator water. The result also showed that Health dimension to be better off in Kohima Rural, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Kohima Rural.

Kiruphema village and Mengujuma village were undertaken as the sample village. From the table, the MPI value for Kiruphema village was observed to be 4%, and for Mengujuma village to be 7%. It indicated multidimensional poverty as more concentrated in Mengujuma village, as compared to Kiruphema village, since MPI value of Mengujuma village was found to be higher than MPI value of Kiruphema village. It was also substantiated by **H**. It is observed from the table, 12% of the population in Kiruphema village, and 20% of the population in Mengujuma village were multidimensionally poor (***H***). It indicated, Mengujuma village have higher percentage of multidimensional poor than Kiruphema village. The intensity of deprivation ***A*** was approximately 34% in Kiruphema village, 37% in Mengujuma village. In other words, poor people in Kiruphema village were on an average unable to have access to 34% of the weighted indicators, and the poor people in Mengujuma village on an average were unable to have access to 37% of the weighted indicators. It also indicated the poor in Mengujuma village have higher percentage of deprivation than Kiruphema village. Among the various indicators, it can be seen that; years of

schooling contributed the highest percent of deprivation (50%) to MPI, followed by sanitation, and housing with similar percentage of deprivations (17%), indicator assets (13%), and indicator cooking fuel (4%), respectively. For Mengujuma village; indicator years of schooling contributed the highest percentage of deprivation (45%) to MPI, followed by sanitation, housing, and cooking fuel with similar percentage of deprivations (15%), and indicator assets (10%), respectively. No deprivation in indicator water.

In Kohima Urban, approximately 4% of the population were multidimensionally poor (**H**). The intensity of poverty ***A*** as 37%, which indicated multidimensional poor in Kohima Urban were on an average deprived in 37% of its weighted indicators. The MPI value was observed to be 2%. Among the various indicator, it can be seen; years of schooling contributed the highest percent of deprivation (45%) to MPI, followed by sanitation, housing, assets and cooking fuel with similar percentage of deprivation (15%), and indicator water (5%), respectively. The result also showed that Health dimension to be better off in Kohima Urban, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Kohima Urban.

NHAK colony and Forest colony were undertaken as sample colonies. From the table it can be observed, the MPI value of NHAK colony was observed to be 1% and MPI value of Forest colony was observed to be 2%. It indicated that, multidimensional poverty was concentrated more in Forest colony as compared to NHAK colony since Forest colony MPI value was higher than NHAK colony. It was also substantiated by the value of **H.** It was observed in the table, only 2% of the population in NHAK colony, and 6% of the population in Forest colony were multidimensionally poor (***H***). It indicated; Forest colony have higher percentage of multidimensional poor than NHAK colony and Kohima Urban. The intensity of deprivation ***A*** was approximately 45% in NHAK colony, approximately and 34% in Forest colony. In other words, poor people in NHAK colony on an average were unable to have access to 45% of the weighted indicators, and the poor people in Forest colony on an average were unable to have access to 34% of the weighted indicators. It also indicated, the poor in NHAK colony have higher percentage of deprivation than Forest colony and Kohima Urban. Among the various indicators, it can be observed, in NHAK colony; indicator years of

schooling contributed the highest percent of deprivation (37%) to MPI, followed by water, sanitation, housing, assets and cooking fuel with similar percentage of deprivations (13% each, respectively). For Forest colony; indicator years of schooling contributed the highest (50%) to MPI, followed by sanitation, housing, and assets with similar percentage of deprivations (15% each respectively). No deprivation in indicator water. The result also showed, dimension Health to be better off in both the colonies, as it has zero contribution to MPI. In other words, people were not deprived in terms of health in both the colonies.

Table no. 3.1.3: MPI of Kohima district

Kohima district									
Area	Indicators in % deprivations								
	Education	Standard of Living							
	Schooling	Water	Sanitation	Housing	Assets	Cooking fuel	**MPI**	**H**	**A**
Kohima	46.18	1.97	15.48	15.48	12.53	8.36	**2.7**	**7.5**	**36.2**
Rural	47.03	0	15.77	15.77	10.92	10.51	**5.5**	**15.6**	**33.5**
Kiruphema Bawe	49.85	0	16.72	16.72	12.78	3.93	**4.1**	**12.10**	**33.50**
Mengujuma	45.06	0	15.11	15.11	9.61	15.11	**7.4**	**20**	**37.10**
Urban	45.85	5.01	15.04	15.04	15.04	15.01	**1.5**	**4.1**	**37.2**
NHAK	37.36	12.53	12.53	12.53	12.53	12.53	**1.1**	**2.4**	**44.70**
Forest	49.85	0	16.72	16.72	16.72	0	**2.1**	**6.2**	**33.50**

Source: Field Survey 2019-20

3.1.4. MPI of Peren district

The results of the censored headcount ratio and the percentage contributions of deprivations to MPI of Peren district is shown in Table no.3.1.4. From the table it can be observed, MPI value as 10%. The table showed, approximately 29% of the population in Peren district were multidimensionally poor as represented by multidimensional headcount ratio ***(H***). The intensity of deprivation as shown by ***A*** for Peren district as 36%. In other words, poor people in Peren district on an average are unable to have access to 36% of the weighted indicators. Among the various indicators, it can be seen; indicator years of schooling contributed highest percent of deprivation (46%) to MPI, followed by indicator sanitation and housing, with similar percentage of deprivations (15%), followed by indicator assets (14%), cooking fuel (9%) and water approximately (1%), respectively. The result also showed that Health dimension to be better off in the district, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Peren district.

In Peren Rural, the MPI value was observed to be 12% and approximately 33% of the population in Peren Rural were multidimensionally poor (**H**). The intensity of poverty ***A*** as 36%, which indicated multidimensional poor in Peren Rural were on an average deprived in 36% of its weighted indicators. Among the various indicator; indicator years of schooling contributed the highest percent of deprivation (45%) to the MPI, followed by indicator sanitation and housing; with similar percentage of deprivation (15%), indicator assets (13%), indicator cooking fuel (10%), and indicator water (1%), respectively. The result also showed that dimension Health to be better off in Peren Rural, as it has zero contribution to MPI. In other words, people were not deprived in terms of dimension health in Peren Rural.

Samzuiram village and New Poilwa village were undertaken as sample villages. From the table it can be observed, MPI value of Samzuiram village to be 12%, which was higher than the MPI value of New Poilwa village (10%). It indicated that, multidimensional poverty was concentrated more in Samzuiram villages as compared to New Poilwa village. It was also substantiated by the value of **H**. It was observed from the table, approximately 34% of the population in Samzuiram village and 23% of the population in New Poilwa village were multidimensionally poor (***H***). The

intensity of deprivation ***A*** was 36% in Samzuiram village and approximately 44% in New Poilwa village. In other words, poor people in Samzuiram village on an average are unable to have access to 36% of the weighted indicators and the poor people in New Poilwa village on an average are unable to have access to 44% of the weighted indicators. Among the various indicators, it can be seen that in Samzuiram village; indicator years of schooling contributed the highest percentage of deprivation (46%) to MPI, followed by indicators sanitation, and housing, with similar percentage of deprivations (15%), followed by indicator assets (13%) and cooking fuel 10%, respectively. No deprivation in indicator water. For New Poilwa village; indicator years of schooling contributed the higher percent of deprivation (38%) to MPI, followed by indicator water, housing, assets and cooking fuel with similar percent of deprivation (13%), followed by indicator sanitation (10%), respectively.

In Peren Urban, from the table it was observed, the MPI value to be 7%. It was observed, approximately 20% of the population in Peren Urban were multidimensionally poor (***H)***. The intensity of poverty ***A*** as 35%, which indicated multidimensional poor in Peren Urban were on an average deprived in 35% of its weighted indicators. Among the various indicator; indicator years of schooling contributed the highest percent of deprivation (48%) to MPI, followed by indicator housing and assets, with similar percent of deprivation (16%), followed by indicator sanitation (13%) and indicator cooking fuel (6%), respectively. The result also showed dimension Health to be better off in as in Peren Urban, as it has zero contribution to MPI. In other words, people are not deprived in terms of dimension health in Peren Urban.

Midland colony and Stadium colony were undertaken as sample colonies**.** From the table, the MPI value of Midland colony was found to be 10%, which was higher than the MPI value of Stadium colony (2%). It indicated that, multidimensional poverty was found to be concentrated more in Midland colony as compared to Stadium colony, which can be substantiated by the value of **H.** It can be observed, approximately 29% of the population in Midland colony, and approximately 5% of the population in Stadium colony, were multidimensionally poor (***H***). It also indicated; Midland colony have higher percentage of multidimensional poor than Stadium colony and Peren

Urban. The intensity of deprivation ***A*** was approximately 35% in Midland colony, and 34% in Stadium colony. In other words, poor people in Midland colony on an average were unable to have access to 35% of the weighted indicators and the poor people in Stadium colony on an average were unable to have access to 34% of the weighted indicators. Among the various indicators, it can be seen, in Midland colony; indicator years of schooling contributed highest percentage of deprivation (48%) to MPI, followed by housing and assets, with similar percentage of deprivations (16% each), followed by sanitation (15%) and cooking fuel (6%), respectively. For Stadium colony; indicators years of schooling contributed the higher percentage of deprivation (45%) to MPI, followed by, sanitation, housing, assets and cooking fuel with similar percentage of deprivations (17% each) respectively.

Table no. 3.1.4: MPI of Peren district

Peren district									
Area	Indicators in % deprivations								
	Education	Standard of Living							
	Schooling	Water	Sanitation	Housing	Assets	Cooking fuel	**MPI**	**H**	**A**
Peren	45.87	0.98	14.63	15.38	13.90	9.25	**10.4**	**28.9**	**36.1**
Peren Rural	45.31	1.24	14.95	15.19	13.32	9.99	**12.0**	**32.9**	**36.4**
Samzuiram	45.93	0	15.40	15.40	13.06	9.81	**12.3**	**33.80**	**36.40**
NewPoilwa	38.32	12.85	10.28	12.58	12.58	12.58	**10.0**	**23.00**	**43.60**
Peren Urban	47.98	0	13.41	16.09	16.09	6.44	**7.0**	**20.1**	**34.8**
Midland	47.82	0	14.58	16.03	16.03	5.54	**10.0**	**28.70**	**34.90**
Stadium	44.59	0	16.72	16.72	16.72	16.72	**1.6**	**4.70**	**33.50**

Source: Field Survey 2019-20

It was observed MPI value of Peren district (10%) was higher than MPI value of Kohima district (3%). It indicated that, multidimensional poverty was concentrated more in Peren district as compared to Kohima district, since its MPI value was higher than Kohima district, which is also substantiated by the value of **H.** It was observed that, multidimensional headcount (***H***) was 29% for Peren district which was found to be much higher than Kohima district ***H*** (8%). It indicated 29% of the population in Peren district were multidimensional poor, and 8% of the population in Kohima district were multidimensional poor. It was observed, MPI value of Kohima Rural was found to be 6%, which was higher than the MPI value of Kohima Urban of 2%. It indicated that, multidimensional poverty to be concentrated more/higher in Kohima Rural as its MPI value is higher than Kohima Urban. The multidimensional headcount (**H)** was found to be 16% in Kohima Rural which is higher in percentage than Kohima Urban of 4%. It showed that, 16% of the population in Kohima Rural were multidimensional poor, which was higher in percentage than Kohima Urban, multidimensional poor population. It was observed, MPI value of Peren Rural was found to be 12%, which was higher than the MPI value of Peren Urban of 7%. It indicated that, multidimensional poverty to be concentrated more/higher in Peren Rural as its MPI value is higher than Peren Urban. The multidimensional headcount (**H)** was found to be 33% in Peren Rural which was higher in percentage than Peren Urban of 20%. It showed that, 33% of the population in Peren Rural were multidimensional poor, which was higher in percentage than Peren Urban, multidimensional poor population. It was observed that, there is a significant difference in multidimensional poverty between the two districts-Kohima and Peren, between Kohima Rural and Kohima Urban, between Peren Rural and Peren Urban. Hence the 1st Hypothesis is being proved.

Thus, in the assessment of poverty through MPI. It was observed, the MPI value was highest in Peren Rural (11%) which was higher than the MPI value of the state itself (8%), and the least MPI value was shown by Kohima Urban (2%). The lower the MPI; better and lower to multidimensional poverty. From the MPI value, it is clear that Peren Rural (12%) has the highest multidimensional poor, followed by Rural areas (11%), Peren district (10%), Nagaland (8%), Peren Urban (7%), Kohima Rural (6%), Urban areas (4%), Kohima district (8%) and Kohima Urban (2%), respectively. It is

substantiated by multidimensional headcount **H**, where 33% of the household in Peren Rural, 30% of the household in Rural areas, 29% of the household in Peren district, 22% of the households in Nagaland, 20% of the household in Peren Urban, 16% of the household in Kohima Rural, 12 of the household in Urban areas, 8% of the household in Kohima district and 4% of the households in Kohima Urban, were multidimensional poor. Thus, there is a significant difference in multidimensional poverty between Rural (30%) and Urban (12%), between Kohima district (8%) and Peren district (29%), between Kohima Rural (16%) and Kohima Urban (2%), and between Peren Rural (33%) and Peren Urban (20%). Hence, Hypothesis 1 is being proved.

It is observed, the intensity of poverty varies i.e., if **H** is highest in Peren Rural, it is not necessary that **A** will also be highest. **A** the intensity of poverty was observed to be highest in Kohima Urban (37%), followed by Nagaland, the state itself, Rural, Kohima district, Peren district, Kohima Rural, and Peren Rural with similar percentage of deprivation (36% each, respectively), and the least intensity of poverty was shown by Urban areas and Peren Urban. It indicated that, in Kohima Urban; multidimensional poor were on an average deprived in 37% of its weighted indicators, which was higher than the state itself. In Nagaland, Rural areas, Kohima district, Peren district, Kohima Rural and Peren Rural; multidimensional poor were on an average deprived in 36% of the weighted indicator, and in Urban areas and Peren Urban; multidimensional poor were on an average deprived in 35% of the weighted indicator.

The highest percent of deprivation in Nagaland was observed in indicator years of schooling and the least percent of deprivation was observed in indicator water. In indicator years of schooling; the highest percent of deprivation was observed in Peren Urban (48%), followed by Urban and Kohima Rural with similar percent of deprivation (47%), Nagaland, Kohima district, Peren district and Peren Rural with similar percent of deprivation (46%), followed by Rural areas, Kohima Urban and Peren Rural with similar percent of deprivation (45%). It indicated that, 48% of the multidimensional poor households in Peren Urban have not completed six years of schooling, which was higher than the state itself, 46% of the multidimensional poor households in Nagaland, Kohima district, Peren district and Peren Rural, have not

completed six years of schooling, and 45% of the multidimensional poor household in Rural, Kohima Urban and Peren Rural have not completed six years of schooling.

In terms of indicator water; the highest deprivation was observed in Kohima Urban (5%), which was higher than the state itself, followed by Kohima district (2%), Nagaland, Rural areas, Urban areas, Peren district, and Peren Rural, with similar percent of deprivation of 1%. It indicated that, 5% of multidimensional poor household in Kohima Urban, was higher than 2% of multidimensional poor household in Kohima district, followed by Nagaland, Rural areas, Urban Peren district, and Peren Rural (1%), does not have access to safe and clean drinking water.

In terms of indicator sanitation; the highest deprivation was observed in Kohima Rural and Peren Urban; with similar percentage of deprivation 16%, followed by Rural areas, Kohima district, Peren district, Kohima Urban, and Peren Rural; with similar percent of deprivation (15%) and Urban (14%), respectively. It indicated that, 16% of the multidimensional poor households in Kohima Rural and Peren Urban does not have access to improved sanitation which was higher than the state itself. It was observed, 15% of the multidimensional poor households in Rural areas, Kohima district, Peren district, Kohima Urban, and Peren Rural, does not have access to improved sanitation and, 14% of the multidimensional poor household in Urban areas does not have access to improved sanitation.

In terms of indicator housing; the highest deprivation was observed in Kohima Rural and Peren Urban (16%), followed by Nagaland, Rural, Urban, Kohima district, Peren district, Kohima Urban and Peren Rural, with similar percent of deprivation 15%. It indicated, in Kohima Rural and Peren Urban; 16% of the multidimensional poor households which was higher in deprivation than the state itself, does not have access to proper housing, and, 15% of the multidimensional poor household in Nagaland, Rural areas, Urban areas, Kohima district, Peren district, Kohima Urban and Peren Rural; does not have access to proper housing.

In terms of indicator assets; the highest deprivation was observed in Urban areas of Nagaland (16%) which was observed to be higher than the state itself, followed by Kohima Urban and Peren Urban; with similar percent of deprivation (15%), followed

by Nagaland and Peren district with similar percent of deprivation (14%), Rural areas, Kohima district, and Peren Rural; with similar percent of deprivation (13%), and Kohima Rural (11%), respectively. It indicated in Urban areas; 16% of the multidimensional poor household does not have access to ownership over the assets. In Kohima Urban and Peren Urban; 15% of the multidimensional poor does not have access to ownership over the assets. In Nagaland and Peren district; 14% of the multidimensional poor household does not have access to ownership over the assets. In Rural areas, Kohima district, and Peren Rural; 13% of the multidimensional poor households does not have access to ownership over the assets, and in Kohima Rural; 11% of the multidimensional poor households does not have access to ownership over the assets.

It terms of indicator cooking fuel, the highest percent of deprivation was observed in Kohima Urban (15%), which was higher than the state itself, followed by Kohima Rural (11%), Rural areas and Peren Rural; with similar percentage of deprivation (10%), Nagaland and Peren district; with similar percent of deprivation (9%), Kohima district (8%), and both Urban areas and Peren Urban; with similar percent of deprivation (6%). It means in Kohima Urban; 15% of the multidimensional poor household does not have access to clean cooking fuel. In Kohima Rural; 11% of the multidimensional poor household, Rural and Peren Rural; 10% of the multidimensional poor household, Nagaland and Peren district; 9% of the multidimensional poor household, Kohima district; 8% of the multidimensional poor household and 6% of the multidimensional poor household in Urban areas and Peren Urban, does not have access to clean cooking fuel.

3.2. Income groups and MPI poor

The relation between various income groups and MPI poor are explained. For the study five income groups were selected- BPL, Lower-income, Middle-income, Upper Middle-income and Rich income. For the BPL; income range is from ₹0-₹5,000, for Lower income group; income range is ₹5,000-₹25,000, for Upper Middle-income group; income range is from ₹50,000-₹124,000 and for the Rich income group; income range is from ₹124,000-any.

3.2.1. Income groups and MPI poor of Nagaland

The result of the relation between various income groups and MPI poor of Nagaland is presented in Table no.3.3.1. The table shows, average income of BPL group as ₹4,000, lower-income group as ₹12,405, middle-income group as ₹32,698, upper middle-income group as ₹73,816 and in rich income group as ₹168,900. The table shows the number of populations in BPL group to be 17, out of which 8 of the population are MPI poor. MPI value is 18% where **H** is 47% and **A** is 39%. It means 47% of the population from BPL households are multidimensional poor, where the poor on an average are deprived in 39% of the weighted indicators. The table shows the number of populations in lower-income group to be 1981, out of which 590 of the population from lower-income group are MPI poor. MPI value is 11% where **H** is 30% and **A** is 37%. It means 30% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. From the table, it is seen that 469 population are from middle-income group, out of which 14 of its population are MPI poor. MPI value is observed to be 1% where **H** is 3% and **A** is 39%. It means 3% of the population from middle-income households are multidimensional poor, who on an average are deprived in 39% of the weighted indicators. The table shows BPL households and middle-income households have similar intensity of poverty. The table also shows the MPI value of BPL households to be 18% which is higher than the MPI value of lower-income households 11% and middle-income households 1%, respectively. It is an indication that multidimensional poverty is more concentrated in BPL income group, followed by lower-income group, and middle-income group as BPL MPI value is higher than lower-income and middle-income group, which is also validated by the multidimensional headcount (***H***); where for the BPL group it was found to be 47%, which is higher in percentage than lower-income group of 30% and middle-income group of 3%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Nagaland; upper middle-income and rich income households do not contribute to multidimensional poverty. The result of the correlation value between MPI poor and average income in the state Nagaland was found to be -0.687. The result indicated, that there exists an inverse relation between

MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income group are vulnerable to multidimensional poverty.

Table no. 3.2.1: Income groups and MPI poor of Nagaland

Nagaland										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor p**	**MPI value**	**H**	**A**
BPL	0-5,000	3	17	12,000	4,000	2	8	0.184	0.471	0.391
Lower	5,000-25,000	358	1981	4,441,000	12,405	97	590	0.109	0.298	0.366
Middle	25,000-50,000	86	469	2,812,000	32,698	2	14	0.012	0.030	0.391
Upper-Middle	50,000-124,000	49	235	3,617,000	73,816	0	0	0	0	0
Rich	124,000-any	10	51	1,689,000	168,900	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.2. Income groups and MPI poor in Rural

The result of the relation between various income groups and MPI poor of Rural areas of Nagaland is presented in Table no.3.2.2. The table shows, average income in BPL group as ₹4,000, in lower-income group as ₹11,612, in middle-income group as ₹32,130, and in upper middle-income group as ₹78,083. The table shows the number of populations in BPL group to be 17, out of which 8 of the population are MPI poor. MPI value is 18% where **H** is 47% and **A** is 39%. It means 47% of the population from BPL households are multidimensional poor, where the poor on an average are deprived in 39% of the weighted indicators. The table shows the number of populations in lower-income group to be 1361, out of which 455 of the population from lower-income group are MPI poor. MPI value is 12% where **H** is 33% and **A** is 37%. It means 33% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. From the table, it is seen that 130 population are from middle-income group, out of which 5 of its population are MPI

poor. MPI value is observed to be 2% where **H** is 4% and **A** is 39%. It means 4% of the population from middle-income households are multidimensional poor, who on an average are deprived in 39% of the weighted indicators. The table shows that BPL and middle-income households have similar intensity of poverty. The table also shows the MPI value of BPL households as 18% which is higher than the MPI value of lower-income households 12% and middle-income households 2%. The MPI value is an indication that, multidimensional poverty is concentrated more in BPL income-group followed by lower income group/households and middle-income group since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the BPL income group was 47%, which is higher than lower-income group of 33% and middle-income group of 4%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Rural areas; upper middle-income households do not contribute to multidimensional poverty. No rich households/income group in Rural areas of Nagaland. The result of the correlation value between MPI poor and average income in Rural areas was observed to be -0532. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.2: Income groups and MPI poor in Rural

Rural										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	3	17	12,000	4000	2	8	0.184	0.471	0.391
Lower	5,000-25,000	232	1361	2,694,000	11,612	73	455	0.124	0.334	0.370
Middle	25,000-50,000	12	130	739,000	32,130	1	5	0.015	0.038	0.391
Upper-Middle	50,000-1,240,00	0	61	937,000	78,083	0	0	0	0	0

Rich	1,240,00-any	270	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.3. Income groups and MPI poor in Urban

The result of the relation between various income groups and MPI poor of Urban areas of Nagaland is presented in Table no.3.2.3. The table shows, average income in lower-income group as ₹13,865, in middle-income group as ₹30,683, in upper middle-income group as ₹37,135 and in rich income group as ₹168,900. The table shows the number of populations in lower-income group to be 620, out of which 135 of the population from lower-income group are MPI poor. MPI value is 8% where **H** is 22% and **A** is 35%. It means 22% of the multidimensional poor are from lower income households, who on an average are deprived in 35% of the weighted indicators. From the table, it is seen that 339 population are from middle-income group, out of which 9 of its population are MPI poor. MPI value is observed to be 1% where **H** is 3% and **A** is 34%. It means 3% of the population from middle-income households are multidimensional poor, who on an average are deprived in 34% of the weighted indicators. The table showed, the MPI value of lower-income households to be 8% which is higher than the MPI value of middle-income households of 1%. The MPI value is an indication that, multidimensional poverty is concentrated more in lower income group/households since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 22% which is higher than middle-income group of 8%. This observation clearly revealed that, multidimensional poor is high in lower-income group, and also high in households whose income is low. It can also be seen from the table in Urban areas; upper middle-income and rich income households do not contribute to multidimensional poverty. No BPL households/income group in Urban areas of Nagaland. The result of the correlation value between MPI poor and average income in Urban areas was observed to be -0.325. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.3: Income groups and MPI poor in Urban

Urban										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in Rs.)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	126	620	1,747,000	13,865	24	135	0.077	0.218	0.353
Middle	25,000 - 50,000	63	339	1,933,000	30,683	1	9	0.009	0.027	0.335
Upper-Middle	50,000 - 124,000	37	174	1,374,000	37,135	0	0	0	0	0
Rich	124000-any	10	51	1,689,000	168,900	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.4. Income groups and MPI poor of Kohima district

The result of the relation between various income groups and MPI poor of Kohima district is presented in Table no.3.2.4. The table shows, average income in lower-income group as ₹13,879, in middle-income group as ₹34,186, in upper middle-income group as ₹69,853 and in rich income group as ₹168,900. The table shows the number of populations in lower-income group to be 427, out of which 63 of the population from lower-income group are MPI poor. MPI value is 5% where **H** is 15% and **A** is 36%. It means 15% of the multidimensional poor are from lower income households, who on an average are deprived in 36% of the weighted indicators. The table showed, the MPI value of lower-income households to be 5%, and no contribution from middle to rich income households. The MPI value is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 15%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in Kohima district; middle-income, upper middle-income and rich income households do not contribute to

multidimensional poverty. No BPL households/income group in Kohima district. The result of the correlation value between MPI poor and average income in Kohima district was observed to be -0.359. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.4: Income groups and MPI poor of Kohima district

Kohima										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	91	427	1,263,000	13,879	11	63	0.053	0.148	0.362
Middle	25,000-50,000	43	211	1,470,000	34,186	0	0	0	0	0
Upper-Middle	50,000-124,000	34	147	2,375,000	69,853	0	0	0	0	0
Rich	124,000-any	10	51	1,689,000	168,900	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.5. Income groups and MPI poor of Kohima Rural

The result of the relation between various income groups and MPI poor of Kohima Rural is presented in Table no.3.2.5. The table shows, average income of lower-income group as ₹10,857, middle-income group as ₹32,500, and upper middle-income group as ₹62,000. The table shows the number of populations in lower-income group to be 213, out of which 39 of the population from lower-income group are MPI poor. MPI value is 7% where **H** is 18% and **A** is 36%. It means 18% of the multidimensional poor are from lower income households, who on an average are deprived in 36% of the weighted indicators. The MPI value of 7% in lower-income group and no contribution from middle-income and upper middle-income group is a representation that multidimensional poverty is concentrated in lower-income households, which is also validated by multidimensional headcount (***H***); that 18% of the population were

multidimensional poor in Kohima Rural. This observation clearly revealed that, multidimensional poor is found in households whose income is low. It can also be seen from the table in Rural Kohima; middle-income, and upper middle-income households do not contribute to multidimensional poverty. No BPL and rich-income households in Kohima Rural. The result of the correlation value between MPI poor and average income in Rural Kohima was observed to be -0.216. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that, lower-income group are vulnerable to multidimensional poverty.

Table no. 3.2.5: Income groups and MPI poor of Kohima Rural

Kohima Rural										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	42	213	456,000	10,857	7	39	0.065	0.183	0.355
Middle	25,000-50,000	4	26	130,000	32,500	0	0	0	0	0
Upper-Middle	50,000-124,000	2	11	124,000	62,000	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.6. Income groups and MPI poor of Kiruphema village

The result of the relation between various income groups and MPI poor of Kiruphema village is presented in Table no.3.2.6. The table shows, average income of lower-income group as ₹9,789, middle-income group as ₹31,667, and upper middle-income group as ₹62,000. The table shows the number of populations in lower-income group to be 108, out of which 17 of the population from lower-income group are MPI poor. MPI value is 5% where **H** is 16% and **A** is 34%. It means 16% of the multidimensional

poor are from lower income households, who on an average are deprived in 34% of the weighted indicators. The MPI value of 5% observed in lower-income group and no contribution from middle-income and upper middle-income group is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 16%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in Kiruphema village; middle-income, and upper middle-income do not contribute to multidimensional poverty. No BPL and rich income household group in Kiruphema village. The result of the correlation value between MPI poor and average income in Kiruphema village was observed to be -0.230. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.6: Income groups and MPI poor in Kiruphema village

Kiruphema village										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	19	108	186,000	9,789	3	17	0.053	0.157	0.335
Middle	25,000 - 50,000	3	21	95,000	31,667	0	0	0	0	0
Upper-Middle	50,000 - 124,000	2	11	124,000	62,000	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.7. Income groups and MPI poor of Mengujuma village

The result of the relation between various income groups and MPI poor of Mengujuma village is presented in Table no.3.2.7. The table shows, average income of lower-income group as ₹11,739, and of middle-income group as ₹35,000. The table shows the number of populations in lower-income group to be 105, out of which 22 of the population from lower-income group are MPI poor. MPI value is 8% where **H** is 21% and **A** is 37%. It means 21% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. The MPI value of 8% observed in lower-income group and no contribution from middle-income and upper middle-income group is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 21%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in Mengujuma village; middle-income do not contribute to multidimensional poverty. No BPL, upper middle-income and rich income household group in Mengujuma village. The result of the correlation value between MPI poor and average income in Mengujuma village was observed to be -0.088. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no.3.2.7: Income groups and MPI poor in Mengujuma village

Mengujuma										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	23	105	270,000	11,739	4	22	0.078	0.210	0.371
Middle	25,000-50,000	1	5	35,000	35,000	0	0	0	0	0
Upper-Middle	50,000-124,000	0	0	0	0	0	0	0	0	0

Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.8. Income groups and MPI poor of Kohima Urban

The result of the relation between various income groups and MPI poor of Kohima Urban is presented in Table no.3.2.8. The table shows, average income of lower-income group as ₹16,469, middle-income group as ₹27,347, upper middle-income group as ₹74,219 and rich income group as ₹168,900. The table shows the number of populations in lower-income group to be 214, out of which 24 of the population from lower-income group are MPI poor. MPI value is 4% where **H** is 11% and **A** is 37%. It means 11% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. The MPI value of 4% observed in lower-income group and no contribution from middle-income, upper middle-income group and rich income group is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 11%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in Kohima Urban; middle-income, upper middle-income and rich income group do not contribute to multidimensional poverty. No BPL household group in Kohima Urban. The result of the correlation value between MPI poor and average income in Kohima Urban was observed to be -0.335. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.8: Income groups and MPI poor of Kohima Urban

Kohima Urban										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0

Lower	5,000-25,000	49	214	807,000	16,469	4	24	0.042	0.112	0.372
Middle	25,000-50,000	49	185	1,340,000	27,347	0	0	0	0	0
Upper-Middle	50,000-124,000	32	136	2.375,000	74,219	0	0	0	0	0
Rich	124,000-any	10	51	1,689,000	168,900	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.9. Income groups and MPI poor of NHAK colony

The result of the relation between various income groups and MPI poor of NHAK colony is presented in Table no.3.2.9. The table shows, average income of lower-income group as ₹16,515, middle-income group as ₹35,045, upper middle-income group as ₹75,500 and rich income group as ₹151,286. The table shows the number of populations in lower-income group to be 130, out of which 8 of the population from lower-income group are MPI poor. MPI value is 3% where **H** is 6% and **A** is 45%. It means 6% of the multidimensional poor are from lower income households, who on an average are deprived in 45% of the weighted indicators. The MPI value of 3% observed in lower-income group and no contribution from middle-income, upper middle-income group and rich income group is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 6%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in NHAK colony; middle-income do not contribute to multidimensional poverty. No BPL income household group in NHAK colony. The result of the correlation value between MPI poor and average income in NHAK colony was observed to be -0.365. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.9: Income groups and MPI poor of NHAK colony

NHAK colony										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	33	130	545,000	16,515	2	8	0.028	0.062	0.447
Middle	25,000-50,000	22	99	771,000	35,045	0	0	0	0	0
Upper-Middle	50,000-124,000	18	66	1,395,000	77,500	0	0	0	0	0
Rich	124,000-any	7	34	1,059,000	151,286	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.10. Income groups and MPI poor of Forest colony

The result of the relation between various income groups and MPI poor of Forest colony is presented in Table no.3.2.10. The table shows, average income of lower-income group as ₹16,375, middle-income group as ₹27,000, upper middle-income group as ₹70,000 and rich income group as ₹210,000. The table shows the number of populations in lower-income group to be 84, out of which 16 of the population from lower-income group are MPI poor. MPI value is 6% where **H** is 19% and **A** is 34%. It means 19% of the multidimensional poor are from lower income households, who on an average are deprived in 34% of the weighted indicators. The MPI value of 6% observed in lower-income group and no contribution from middle-income, upper middle-income group and rich income group is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group is 19%. This observation clearly revealed that, multidimensional poor is high in households' whose income is low. It can also be seen from the table in Forest colony; middle-income do not contribute to multidimensional poverty. No BPL income household group in Forest colony. The result of the correlation value between MPI poor and average income in Forest colony was observed to be -0.317. It indicated that, there exists an inverse

relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation supports Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.10: Income groups and MPI poor of Forest colony

Forest colony										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	16	84	262,000	16,375	2	16	0.064	0.190	0.335
Middle	25,000-50,000	17	86	0459,000	27,000	0	0	0	0	0
Upper-Middle	50,000-124,000	14	70	0980,000	70,000	0	0	0	0	0
Rich	124,000-any	3	17	630,000	210,000	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.11. Income groups and MPI poor of Peren district

The result of the relation between various income groups and MPI poor of Peren district is presented in Table no.3.2.11. The table shows, average income of BPL group to be ₹4,000, lower-income group to be ₹11,858, middle-income group to be ₹31,209, and upper middle-income group to be ₹74,533. The table shows the number of populations in BPL group to be 17, out of which 8 of the population are MPI poor. MPI value is 18% where **H** is 47% and **A** is 39%. It means 47% of the population from BPL households are multidimensional poor, where the poor on an average are deprived in 39% of the weighted indicators. The table shows the number of populations in lower-income group to be 1554, out of which 527 of the population from lower-income group are MPI poor. MPI value is 12% where **H** is 34% and **A** is 37%. It means 34% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. From the table, it is seen that 258

population are from middle-income group, out of which 14 of its population are MPI poor. MPI value is observed to be 2% where **H** is 5% and **A** is 36%. It means 5% of the population from middle-income households are multidimensional poor, who on an average are deprived in 36% of the weighted indicators. The table shows lower-income and middle-income households have similar intensity of poverty. The table also shows the MPI value of BPL households to be 18% which is higher than the MPI value of lower-income households 12% and middle-income households 5%. The MPI value is an indication that, multidimensional poverty is concentrated more in BPL income-group followed by lower income group/households and middle-income group since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the BPL income group was 47%, which is higher than lower-income group of 34% and middle-income group of 5%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Peren district; upper middle-income households do not contribute to multidimensional poverty. No rich households/income group in Peren district. The result of the correlation value between MPI poor and average income in Peren district was observed to be -0502. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.11: Income groups and MPI poor of Peren district

Peren										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	3	17	12,000	4,000	2	8	0.184	0.471	0.391
Lower	5,000-25,000	268	1554	3,178,000	11,858	86	527	0.124	0.339	0.367
Middle	25,000-50,000	43	258	1,342,000	31,209	2	14	0.019	0.054	0.355
Upper-Middle	50,000-124,000	15	88	1,118,000	74,533	0	0	0	0	0

Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Filed survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.12. Income groups and MPI poor of Peren Rural

The result of the relation between various income groups and MPI poor of Peren Rural is presented in Table no.3.2.12. The table shows, average income of BPL group as ₹4,000, lower-income group as ₹11,717, middle-income group as ₹32,053, and upper middle-income group as ₹81,300. The table shows the number of populations in BPL group to be 17, out of which 8 of its population are MPI poor. MPI value is 18% where **H** is 49% and **A** is 39%. It means 49% of the multidimensional poor are from the BPL households, who on an average are deprived in 39% of its weighted indicators. The table shows the number of populations in lower-income group to be 1148, out of which 416 of the population from lower-income group are MPI poor. MPI value is 14% where **H** is 36% and **A** is 37%. It means 36% of the multidimensional poor are from lower income households, who on an average are deprived in 37% of the weighted indicators. From the table, it is seen that 104 population are from middle-income group, out of which 5 of its population are MPI poor. MPI value is observed to be 2% where **H** is 5% and **A** is 39%. It means 5% of the population from middle-income households are multidimensional poor, who on an average are deprived in 39% of the weighted indicators. The table shows BPL and middle-income households share similar percentage of intensity of poverty. The table also shows the MPI value of BPL households to be 18% which is higher than the MPI value of lower-income households 13% and middle-income households 4%. The MPI value is an indication that, multidimensional poverty is concentrated more in BPL income-group followed by lower income group/households and middle-income group since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the BPL income group was 47%, which is higher than lower-income group of 37% and middle-income group of 9%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Peren Rural; upper middle-income households do not contribute to multidimensional poverty. No rich households/income group in Peren Rural. The result

of the correlation value between MPI poor and average income in Peren Rural was observed to be -0509. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.12: Income groups and MPI poor of Peren Rural

Peren Rural										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	3	17	12,000	4,000	2	8	0.184	0.491	0.391
Lower	5,000-25,000	191	1148	2,238,000	11,717	66	416	0.135	0.362	0.372
Middle	25,000-50,000	19	104	609,000	32,053	1	5	0.019	0.048	0.391
Upper-Middle	50,000-124,000	10	50	813,000	81,300	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.13. Income groups and MPI poor of Samzuiram village

The result of the relation between various income groups and MPI poor of Samzuiram village is presented in Table no.3.2.13. The table shows, average income of BPL group as ₹4,000, of lower-income group as ₹11,531, middle-income group as ₹32,500, and upper middle-income group as ₹81,300. The table shows the number of populations in BPL group to be 17, out of which 8 of the population are MPI poor. MPI value is 18% where **H** is 47% and **A** is 39%. It means 47% of the population from BPL households are multidimensional poor, where the poor on an average are deprived in 39% of the weighted indicators. The table shows the number of populations in lower-income group to be 1044, out of which 381 of the population from lower-income group are MPI poor. MPI value is 13% where **H** is 37% and **A** is 37%. It means 37% of the multidimensional poor are from lower income households, who on an average are

deprived in 37% of the weighted indicators. From the table, it is seen that 56 of its population are from middle-income group, out of which 5 of its population are MPI poor. MPI value is observed to be 4% where **H** is 9% and **A** is 39%. It means 9% of the population from middle-income households are multidimensional poor, who on an average are deprived in 39% of the weighted indicators. The table shows BPL and middle-income households have similar intensity of poverty. The table also shows the MPI value of BPL households to be 18% which is higher than the MPI value of lower-income households 13% and middle-income households 4%. The table also shows the MPI value of BPL households to be 18% which is higher than the MPI value of lower-income households 12% and middle-income households 5%. The MPI value is an indication that, multidimensional poverty is concentrated more in BPL income-group followed by lower income group/households and middle-income group since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the BPL income group was 47%, which is higher than lower-income group of 37% and middle-income group of 9%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Samzuiram village; upper middle-income households do not contribute to multidimensional poverty. No rich households/income group in Samzuiram village. The result of the correlation value between MPI poor and average income in Samzuiram village was observed to be -0509. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no.3.2.13: Income groups and MPI poor in Samzuiram village

Samzuiram village										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	3	17	12,000	4,000	2	8	0.184	0.471	0.391
Lower	5,000-25,000	175	1044	2,018,000	11,531	62	381	0.133	0.365	0.366

Middle	25,000-50,000	10	56	325,000	32,500	1	5	0.035	0.089	0.391
Upper-Middle	50,000-124,000	10	50	813,000	81,300	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.14. Income groups and MPI poor of New Poilwa village

The result of the relation between various income groups and MPI poor of New Poilwa village is presented in Table no.3.2.14. The table shows, average income of lower-income group as ₹13,750, and of middle-income group as ₹31,556. The table shows the number of populations in lower-income group to be 104, out of which 35 of the population from lower-income group are MPI poor. MPI value is 15% where **H** is 34% and **A** is 44%. It means 34% of the multidimensional poor are from lower income households, who on an average are deprived in 44% of the weighted indicators. The MPI value of lower-income group to be 15%, but no contribution from middle-income group, is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for lower-income group, it was observed to be 34%, and no contribution from middle-income group. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in New Poilwa village; middle-income households do not contribute to multidimensional poverty. No BPL, upper middle-income and rich households/income group in New Poilwa village. The result of the correlation value between MPI poor and average income in New Poilwa village was observed to be -0.188. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.14: Income groups and MPI poor in New Poilwa village

New Poilwa village										
Income group	**Y range (in Rs.)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000		0	0	0	0	0	0	0	0
Lower	5,000-25,000	16	104	220,000	13,750	4	35	0.147	0.337	0.436
Middle	25,000-50,000	9	48	0284,000	31,556	0	0	0	0	0
Upper-Middle	50,000-124,000	0	0	0	0	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.15. Income groups and MPI poor of Peren Urban

The result of the relation between various income groups and MPI poor of Peren Urban is presented in Table no.3.2.15. The table shows, average income of lower-income group as ₹12,208, middle-income group as ₹30,542, and upper middle-income group as ₹61,000. The table shows the number of populations in lower-income group to be 406, out of which 111 of the population from lower-income group are MPI poor. MPI value is 10% where **H** is 27% and **A** is 35%. It means 27% of the multidimensional poor are from lower income households, who on an average are deprived in 35% of the weighted indicators. From the table, it is seen that 154 of the population are from middle-income group, out of which 9 of its population are MPI poor. MPI value is observed to be 2% where **H** is 6% and **A** is 34%. It means 6% of the population from middle-income households are multidimensional poor, who on an average are deprived in 34% of the weighted indicators. The table shows that although, there is a difference in incidence of poverty between the two categories, there is not much of a difference in the intensity of poverty. The table also shows the MPI value of lower-income group/ households to be 10% which is higher than the MPI value of middle-income households/group of 2%. The MPI value is an indication that, multidimensional poverty is concentrated more in lower income group/households, followed by middle-income group since its MPI value is higher, which is also validated by

multidimensional headcount (***H***) where for the lower-income group was 27%, which is higher than middle-income group of 6%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Peren Urban; upper middle-income households do not contribute to multidimensional poverty. No BPL and rich households/income group in Peren Urban. The result of the correlation value between MPI poor and average income in Peren Urban was observed to be -0.146. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.15: Income groups and MPI poor of Peren Urban

Peren Urban										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	77	406	940,000	12,208	20	111	0.095	0.273	0.349
Middle	25,000 - 50,000	24	154	733,000	30,542	1	9	0.020	0.058	0.335
Upper-Middle	50,000 - 124,000	5	38	305,000	61,000	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.16. Income groups and MPI poor of Midland colony

The result of the relation between various income groups and MPI poor of Midland colony is presented in Table no.3.2.16. The table shows, average income of lower-income group as ₹12,071, middle-income group as ₹26,545, and upper middle-income group as ₹66,667. The table shows the number of populations in lower-income group

to be 301, out of which 101 of the population from lower-income group are MPI poor. MPI value is 12% where **H** is 34% and **A** is 35%. It means 34% of the multidimensional poor are from lower income households, who on an average are deprived in 35% of the weighted indicators. From the table, it is seen that 60 population are from middle-income group, out of which 9 of its population are MPI poor. MPI value is observed to be 5% where **H** is 15% and **A** is 34%. It means 15% of the population from middle-income households are multidimensional poor, who on an average are deprived in 34% of the weighted indicators. The table shows that although, there is a difference in incidence of poverty between the two categories, there is not much of a difference in the intensity of deprivation. The table also shows the MPI value of lower-income group/ households to be 12% which is higher than the MPI value of middle-income households/group of 5%. The MPI value is an indication that, multidimensional poverty is concentrated more in lower income group/households, followed by middle-income group since its MPI value is higher, which is also validated by multidimensional headcount (***H***) where for the lower-income group was 34%, which is higher than middle-income group of 15%. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Midland colony; upper middle-income households do not contribute to multidimensional poverty. No BPL and rich households/income group in Midland colony. The result of the correlation value between MPI poor and average income in Midland colony was observed to be -0.136. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.16: Income groups and MPI poor of Midland colony

Midland colony										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0

Lower	5,000-25,000	56	301	676,000	12,071	19	101	0.118	0.336	0.351
Middle	25,000-50,000	11	60	292,000	26,545	1	9	0.050	0.150	0.335
Upper-Middle	50,000-124,000	3	22	200,000	66,667	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

3.2.17. Income groups and MPI poor of Stadium colony

The result of the relation between various income groups and MPI poor of Stadium colony is presented in Table no.3.2.17. The table shows, average income of lower-income group as ₹12,571, middle-income group as ₹31,615, and upper middle-income group as ₹52,500. The table shows the number of populations in lower-income group to be 105, out of which 10 of the population from lower-income group are MPI poor. MPI value is 3% where **H** is 10% and **A** is 34%. It means 10% of the multidimensional poor are from lower income households, who on an average are deprived in 34% of the weighted indicators. The MPI value of lower-income group/ households of 3% and no contribution from middle-income and upper middle-income group/households, is an indication that, multidimensional poverty is concentrated in lower income group/households, which is also validated by multidimensional headcount (***H***) where for the lower-income group was found to be 10% and no contribution from middle-income and upper middle-income group. This observation clearly revealed that, multidimensional poor is high in households whose income is low, and vice-versa. It can also be seen from the table in Stadium colony; middle-income and upper middle-income households do not contribute to multidimensional poverty. No BPL and rich households/income group in Stadium colony. The result of the correlation value between MPI poor and average income in Stadium colony was observed to be -0.167. It indicated that, there exists an inverse relation between MPI poor and average income. It means, when there is a rise in income; MPI poor falls and when there is a fall in income; MPI rises. This observation proved Hypothesis 2 that lower income groups are vulnerable to multidimensional poverty.

Table no. 3.2.17: Income groups and MPI poor of Stadium colony

Stadium colony										
Income group	**Y range (in ₹)**	**No. of HH**	**No. of P**	**Total Y (in ₹)**	**Avg. Y (in ₹)**	**MPI poor HH**	**MPI poor P**	**MPI value**	**H**	**A**
BPL	0-5,000	0	0	0	0	0	0	0	0	0
Lower	5,000-25,000	21	105	264,000	12,571	1	10	0.032	0.095	0.335
Middle	25,000-50,000	13	94	411,000	31,615	0	0	0	0	0
Upper-Middle	50,000-124,000	2	16	105,000	52,500	0	0	0	0	0
Rich	124,000-any	0	0	0	0	0	0	0	0	0

Source: Field Survey 2019-20
Note Y-Income, P-Population Avg.-Average

Thus, the relation of various income group and MPI poor showed that, from BPL income group; 49% of the population from Peren Rural, which was higher than the state BPL percentage (47%), followed by Peren district (35%), and Rural areas (33%) were multidimensional poor. From the lower income group; the highest percentage of deprivation was from Peren Rural (36%), followed by Peren district (35%), Rural (33%), Nagaland (30%), Peren Urban (27%), Urban (22%), Kohima Rural (18%), Kohima district (15%) and Kohima Urban (11%). It indicated that from the lower-income group; 36% of the population from Peren Rural, 35% of the population from Peren district, 33% of the population from Rural, 30% of the population From Nagaland, 27% of the population from Peren Urban, 22% of the population form Urban, 18% of the population from Kohima Rural, 15%of the population from Kohima district and 11% of the population from Kohima Urban were multidimension poor. From the middle-income group; the highest percent of deprivation was observed in Nagaland (39%), followed by Urban (8%), Peren district and Peren Rural (5%), and Rural (4%), respectively. It indicated, 39% of the population from Nagaland, 8% of the population from Urban, 5% of the population from both Peren district and Peren Rural, and 4% of the population from Rural were multidimensional poor. From Kohima district; from middle-income group; no contribution to multidimensional poverty. It is also observed that in Nagaland; upper middle-income and rich income

group does not contribute to multidimensional poverty. This observation indicated that, multidimensional poor is high in households whose income is low. This observation proved Hypothesis 2 that lower-income group are vulnerable to multidimensional poverty.

The result of the correlation value between MPI poor and average income were as follows for Nagaland -0.687, for Rural -0.532, for Urban -0.325, for Kohima district 0.359, for Kohima Rural -0.216, for Kohima Urban -0.335, for Peren district -0.502, for Peren Rural -0.504 and for Peren Urban 0.146. The result showed, there exists an inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that lower-income group are vulnerable to multidimensional poverty.

3.3.1. Contribution of various income groups to MPI in Nagaland

The result of the percentage contribution of various income categories in Nagaland to the MPI is presented in Table no.3.3.1. The table shows among the income group; the percentage of lower- income group was significantly higher in percentage than BPL, middle-income, and upper middle-income and rich-income households i.e., approximately 72% of the population belonged to lower-income group which was significantly much higher in percentage than, BPL (1%), middle-income (17%), upper middle-income (9%) and rich-income group (2%), respectively. The table showed; income group belonged from BPL to rich-income, where, BPL to middle-income contributed to multidimensional poverty. The table shows from the BPL; 47% of the population are multidimensional poor, from the lower-income; about 30% of the population are multidimensional poor and from the middle-income; approximately 3% are multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 3%, or increases with fall in income (i.e., from 3% to 47%). It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

The table shows, in Rural areas; the percentage of lower- income household was significantly higher in percentage than BPL, middle-income and upper middle -income

groups i.e., approximately 87% of the population belonged to lower-income household which was significantly much higher in percentage than BPL (1%), middle-income (8%) and upper middle-income (4%), respectively. In Rural areas; households comprised from BPL to upper middle-income, where, BPL to middle-income contributed to multidimensional poverty. The table showed from the BPL households; about 47% of the population are multidimensional poor, from the lower-income group; 33% of the population are confined to multidimensional poverty and from middle-income; approximately 4% of the population are multidimensional poor. It was observed, the contribution to MPI decreases with increase in income i.e., from 47% to 4%, and vice versa. It indicated, household with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that lower income group are more vulnerable to multidimensional poverty.

The table shows among the income categories in Urban areas; the percentage of lower-income group/household was significantly higher in percentage than middle-income, upper middle-income and rich-income group i.e., approximately 52% of the population in belonged to lower-income which was significantly higher in percentage than middle-income (29%), upper middle-income (15%) and rich-income (4%), respectively. Households belonged from lower-income to rich-income, where, lower-income and middle-income were contributing to multidimensional poverty. BPL households were not observed in Urban. The table shows, from lower-income households; about 22% of the population were multidimensional poor and from the middle-income 3% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 22% to 3%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are more vulnerable to multidimensional poverty.

Table no. 3.3.1: Contribution of various income categories to MPI in Nagaland

Percentage contribution						
Income group	**Nagaland**	**MPI**	**Rural**	**MPI**	**Urban**	**MPI**
BPL	0.62%	47.06%	1.08%	47.06%	0%	0%

Lower	71.96%	29.78%	86.74%	33.43%	52.36	21.77%
Middle	17.04%	2.99%	8.29%	3.8%	28.63	2.7%
Upper Middle	8.54%	0%	3.89	0%	14.70	0%
Rich	1.85%	0%	0%	0%	4.31	0%

Source: Field Survey 2019- 20

3.3.2. Contribution of various income groups to MPI in Kohima district

The result of the percentage contribution of various income categories in Kohima district to the MPI is presented in Table no.3.3.2. The table shows among the income group; the percentage of lower-income was significantly much higher in percentage than, middle-income, upper middle-income and rich-income group i.e., approximately 51% of the population belonged to lower-income which was significantly much higher in percentage than, middle-income (25%), upper middle-income (18%) and rich-income group (6%), respectively. No BPL households were observed. The table showed; households comprised from lower-income to rich-income, where it was observed only lower-income households contributed to multidimensional poverty. The table shows from lower-income group, approximately 15% of the population were confined to multidimensional poverty. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

The table shows among the income categories in Kohima Rural; the percentage of lower-income is significantly higher in percentage than middle-income and upper middle-income i.e., approximately 85% of the population belonged to lower-income which was significantly much higher in percentage than, middle-income whose percentage contribution was approximately 10%, and upper middle-income as 4%, respectively. No BPL and rich-income group were observed. The table showed; household belonged from lower-income to upper middle-income, where it was observed that only lower-income were contributing to multidimensional poverty. BPL and rich- income groups were not observed. The table showed, from the lower-income; about 18% of the population were multidimensional poor. It indicated, households with

lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Kiruphema village; the percentage of lower-income was significantly higher in percentage than middle-income and upper middle-income group, i.e., approximately 77% of the population belonged to lower-income household which was significantly much higher in percentage than, 15% households of Middle-income and 8% households of upper middle-income group. No BPL and rich income group were observed. The table showed; households comprised from lower-income to upper middle-income, where, it was observed that, only lower-income households were contributing to multidimensional poverty. The table shows, from lower-income group, about 16% of the population are multidimensional poor. It also indicated that lower income households contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Mengujuma village, the percentage of lower-income household was significantly higher in percentage than middle-income households, i.e., approximately 95% of the population belonged to lower-income household which was significantly much higher in percentage than, 5% of middle-income households. No BPL, upper middle-income and rich income groups were observed. The table showed, households comprised from lower-income and middle-income households, where it was observed that, only lower-income households were contributing to multidimensional poverty. The table shows that, from lower-income households, 21% of the population were multidimensional poor. It also indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

The table shows among the income categories in Kohima Urban; the percentage of lower-income was significantly higher in percentage than middle-income, upper middle-income and rich-income groups i.e., approximately 37% of the population belonged to lower-income, 32% of the population belongs to middle-income, 23% of the population belong to upper middle-income and 9% of the population belong to rich-income groups, respectively. The table showed; households comprised from

lower-income to rich-income, where, it was observed that only lower-income were contributing to multidimensional poverty. BPL households were not observed. The table shows, from the lower-income group, about 11% of the population were multidimensional poor. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In NHAK colony; the percentage of lower-income was significantly higher in percentage than, middle-income, upper middle-income and rich-income group i.e., approximately 40% of the population in NHAK colony belonged to lower-income which was significantly much higher in percentage than, 30% of the population who belong to middle-income, 20% of the population belong to upper middle-income and 10% of the population belong to rich-income groups, respectively. No BPL households were observed. The table shows, households comprised from lower-income to rich-income groups, where it was observed that, only lower-income groups were contributing to multidimensional poverty. The table shows that, from the lower-income, about 6% of the households were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Forest colony; the percentage of lower-income and middle-income was found to be similar in percentage and was significantly higher in percentage than upper middle-income and rich income i.e., approximately 33% of the population belonged to lower-income and middle-income which was significantly higher in percentage than, 27% of the population belonging to upper Middle-income and 7% of the population belonging to rich-income groups, respectively. No BPL households were observed. The table showed; households constituted from lower-income to rich-income group, where, it was observed that, only lower-income households were contributing to multidimensional poverty. The table shows, from lower-income group, about 19% of the households were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

Table no. 3.3.2: Contribution of various income group to MPI in Kohima district

Income group	Percentage contribution													
	Kohima	**MPI**	**Rural**	**MPI**	**Kiruphema**	**MPI**	**Mengujuma**	**MPI**	**Urban**	**MPI**	**NHAK**	**MPI**	**Forest**	**MPI**
BPL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lower	51.08	14.75	85.2	18.31	77.14	15.74	95.45	20.95	36.52	11.21	39.51	6.15	32.68	19.05
Middle	25.24	0	10.4	0	15	0	4.55	0	31.57	0	30.09	0	33.46	0
Upper Middle	17.58	0	4.4	0	7.86	0	0	0	23.21	0	20.06	0	27.24	0
Rich	6.10	0	0	0	0	0	0	0	8.70	0	10.33	0	6.61	0

Source: Field Survey 2019-20
Note: Y-Income

3.3.3. Contribution of various income groups to MPI in Peren district

The result of the percentage contribution of various income categories in Peren district to the MPI is presented in Table no.3.3.3. The table shows among the income categories in; the percentage of lower-income group is significantly much higher in percentage than, BPL, middle-income, and upper middle-income group i.e., approximately 81% of the population belonged to lower-income which was significantly much higher in percentage than, BPL (approximately 1%), middle-income (13%), and upper middle-income group (5%), respectively. Absence of rich-income group was observed. The table showed; households comprised from BPL-income to upper middle-income, where it was observed that, BPL, lower-income and middle-income groups contributed to multidimensional poverty. The table shows from BPL households, 47% of the population were multidimensional poor, from lower -income, approximately 34% of the population were confined to multidimensional poverty and from the middle-income, 5% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 5% and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2, that lower income group are vulnerable to multidimensional poverty.

The table shows among the income categories in Peren Rural; the percentage of lower-income was significantly higher in percentage than BPL, middle-income and upper middle-income i.e., approximately 87% of the population belonged to lower-income group which is significantly much higher in percentage than, BPL (1%), Middle-income (8%) and upper middle-income group (4%), respectively. Households comprised from lower-income to upper middle-income, where it was observed that, BPL, lower-income and middle-income group were contributing to multidimensional poverty. Absence of rich-income group was observed. The table showed, from BPL; 47% of the population were multidimensional poor, from lower-income; about 36% of the population were multidimensional poor and from middle-income; about 5% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 5%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This

observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Samzuiram village; the percentage of lower-income is significantly higher in percentage than, BPL, middle-income, and upper middle -income group i.e., approximately 89% of the population belonged to lower-income group which was significantly much higher in percentage than, BPL (1%), middle-income (5%), and upper middle-income group (4%), respectively. The table showed; households belong from BPL to upper middle-income, where it was observed that, BPL, lower-income and middle-income groups were contributing to multidimensional poverty. The table shows, from BPL; 47% of the population were multidimensional poor, from the lower-income, about 36% of the population were multidimensional poor, and from the middle-income 9% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 9%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In New Poilwa village; the percentage of lower-income was significantly higher in percentage than, middle-income i.e., approximately 68% of the population belonged to lower-income group which was significantly much higher in percentage than, 32% of the population belonging to middle-income group. Absence of BPL, upper middle-income and rich-income group. The table showed; households comprised from lower-income to middle-income group, where it was observed that, only lower-income were contributing to multidimensional poverty. The table shows, from the lower-income group; about 34% of the households were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

The table shows among the income categories in Peren Urban; the percentage of lower-income group was significantly higher in percentage than middle-income group and upper middle-income group i.e., approximately 68% of the population in Peren Urban

belonged to lower-income which was significantly much higher in percentage than, 26% of the population who belongs to middle-income group, and 6% of the population belonging to upper middle-income, respectively. The table shows; households constituted from lower-income to upper middle-income, where, it was observed that, only lower-income group were contributing to multidimensional poverty. No BPL and rich-income was observed. The table shows, from the lower-income, about 27% of the population were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved the Hypothesis 2 that, lower income group are more vulnerable to multidimensional poverty.

In Midland colony; the percentage of lower-income was significantly much higher in percentage than, middle-income and upper middle-income i.e., approximately 79% of the population belonged to lower-income group which was significantly much higher in percentage than, 16% of the population belonging to middle-income group and 6% of the population belonging to upper middle-income group, respectively. No BPL and rich income group were observed in Midland colony. The table shows in Midland colony; households comprised from lower-income group to upper middle-income group, where it was observed that, lower-income group and middle-income group contributed to multidimensional poverty. The table shows, from the lower-income group, approximately 34% of the households were multidimensional poor and from the middle-income group about 15% of the households were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 34% to 15%, and vice versa. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Stadium colony; the percentage of lower-income group was significantly higher in percentage than, middle-income and upper middle-income group i.e., approximately 49% of the population belonged to lower-income group which is significantly much higher in percentage than, 44% of the population belonging to middle-income group and 7% of the population belonging to upper middle-income group, respectively. Absence of BPL and rich-income group were observed in Stadium colony. The table

showed in Stadium colony; households comprised from lower-income group to upper middle-income group, where, it was observed that, only lower-income group were contributing to multidimensional poverty. The table show, from lower-income households; about 10% of the population were multidimensional poor. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

Thus, in terms of contribution of various income group to MPI it was observed in Nagaland, income group comprising from BPL to rich-income group. From the BPL income group; 47% of the population contributed to MPI, from lower-income group; 30% of the population contributed to MPI, from middle-income group; 3% of the population contributed to MPI. No contribution from upper middle-income and rich income group to MPI. It was observed that as income increases i.e., from BPL to rich income group, we see percentage decline in contribution to MPI. It is an indication that as income increases, there is a decline in MPI poor and vice-versa. It is also an indication, that households with lower-income contributed to multidimensional poverty, which proved Hypothesis 2 that, lower-income group vulnerable to multidimensional poverty.

In Rural, income group comprising from BPL to upper middle-income group. It was observed, from BPL income group; 47% of the population contributed to MPI, from lower-income group; 33% of the population contributed to MPI and from middle-income group; 4% of the population contributed to MPI. No contribution from upper middle-income group and rich income group to MPI. It was also observed that as income increases i.e., from BPL to upper middle- income group, we see percentage decline in contribution to MPI. Absence of rich-income group in Rural areas. It is an indication that, households with lower-income contributed to multidimensional poverty, which proved Hypothesis 2 that, lower-income group are more vulnerable to multidimensional poverty.

In Urban, income group comprising from lower to rich income group. It was observed, from lower-income group; 22% of the population contributed to MPI and from middle-

income group; 3% of the population contributed to MPI. No contribution to MPI from upper middle-income group and rich income group. Absence of BPL group in Urban areas. It was also observed that as income increases i.e., from lower-income to rich income group, we see percentage decline in contribution to MPI. It is an indication that, households with lower-income group contributed to multidimensional poverty, which proved Hypothesis 2 that, lower-income group are vulnerable to multidimensional poverty.

In Kohima district, income group comprising from lower-income to rich income group. No BPL group. Only lower-income group contributed to MPI. In Kohima district; 15% of the household contributed to MPI, and no contribution from middle-income, upper middle-income and rich income group. In Kohima Rural, income group comprising from lower-income to upper middle-income group. Absence of BPL and rich-income group in Kohima Rural. Only lower-income group contributed to MPI, where it was observed that 18% of the households from lower-income group contributed to MPI. No contribution to MPI from BPL, middle-income, and upper middle-income group. In Kiruphema village, income group comprising from lower-income to upper middle-income group. Absence of BPL and rich-income group in Kiruphema village. Only lower-income group contributed to MPI, where it was observed that, 16% of the household from lower-income group contributed to MPI. No contribution from middle-income group, and upper middle-income group MPI. In Mengujuma village, income group comprising from lower-income to middle-income group. Absence of BPL, upper middle-income group and rich income group, only lower-income group contributed to MPI, where, it was observed that 21% of the household from lower-income group contributed to MPI. No contribution to MPI from middle-income, upper middle-income and group. It is an indication that, households with lower-income households contributed to multidimensional poverty, which proved Hypothesis 2 that, lower-income group are vulnerable to multidimensional poverty.

In Kohima Urban, income group comprising from lower-income to rich income group. Absence of BPL group. Only lower-income group contributed to MPI, where it was observed that, 11% of the household from lower-income group contributed to MPI. No contribution to MPI from middle-income, upper middle-income and rich income

group. In NHAK colony; income group comprising from lower-income group to rich income group. Absence of BPL group. Only lower-income group contributed to MPI in NHAK colony, where it was observed that, 6% of the household from lower-income group contributed to MPI. No contribution to MPI from middle-income, upper middle-income and rich income group. In Forest colony, income group comprising from lower-income to rich income group. Absence of BPL group. Only lower-income group contributed to MPI in Forest colony, where it was observed that, 19% of the household from lower-income group contributed to MPI. No contribution to MPI from middle-income, upper middle-income and rich income group. It was observed that as income increases i.e., lower-income to rich income group, we see percentage decline in contribution to MPI. It is an indication that, households with lower-income households contributed to multidimensional poverty, which proved Hypothesis 2 that, lower-income group are vulnerable to multidimensional poverty.

In Peren district, income group comprising from BPL to upper middle-income group. It was observed, from BPL income group; 47% of the population contributed to MPI, from lower-income group; 34% of the population contributed to MPI and from middle-income group; 5% of the population contributed to MPI. Upper middle-income group does not contribute to MPI, and absence of rich-income group. In Peren Rural, income group comprising from BPL to upper middle-income group. It was observed, from BPL income group; 47% of the household contributed to MPI, from lower-income group; 36% of the household contributed to MPI and from middle-income group; 5% of the household contributed to MPI. Upper middle-income group does not contribute to MPI, and absence of rich income group. In Samzuiram village, income group comprising from BPL to upper middle-income group. It was observed, from BPL income group; 47% of the household contributed to MPI, from lower-income group; 36% of the household contributed to MPI and from middle-income group; 10% of the household contributed to MPI. Upper middle-income group does not contribute to MPI. In village New Poilwa, income group comprising from lower-income and middle-income group. Absence of BPL, upper middle-income and rich income group. It was observed, only lower-income group contributed to MPI, where, 34% of the population from lower-income group contributed to MPI. No contribution to MPI from

middle-income group. It was also observed that as income increases i.e., from BPL to rich income group, we see percentage decline in contribution to MPI. It is an indication that as income increases, there is a decline in MPI poor and vice-versa. It is also an indication, households with lower-income contributed to multidimensional poverty, which supports Hypothesis 2 that lower-income group are vulnerable to multidimensional poverty.

In Peren Urban, income group comprising from lower to upper middle-income group. Absence of BPL and rich income group. It was observed, only lower-income group contributed to MPI; 27% of the population contributed to MPI. Under Peren Urban, in Midland colony, income group comprising from lower to middle-income group. Absence of BPL and rich-income group. It was observed, from lower income group; 34% of the household contributed to MPI and from middle-income group; 15% of the household contributed to MPI. No contribution to MPI from middle-income group and upper middle-income group. In Stadium colony, income group comprising from lower to upper-middle income group. Absence of BPL, upper middle-income and rich income group. Only lower-income group contributed to MPI; 10% of the household contributed to MPI. It was observed that as income increases, we see percentage decline in contribution to MPI. It is an indication that as income increases, there is a decline in MPI poor and vice-versa. It is also an indication that, households with lower-income contributed to multidimensional poverty, which supports Hypothesis 2 that, lower-income group are vulnerable to multidimensional poverty.

Table no. 3.3.3: Contribution of various income groups to MPI in Peren district

Percentage contribution														
Income group	**Peren**	**MPI**	**Rural**	**MPI**	**Samzuiram**	**MPI**	**New Poilwa**	**MPI**	**Urban**	**MPI**	**Midland**	**MPI**	**Stadium**	**MPI**
BPL	0.89	47.06	1.29	47.06	1.46	47.06	0	0	0	0	0	0	0	0
Lower	81.06	33.91	87.04	36.24	89.46	36.49	68.42	33.65	67.89	27.34	78.59	33.55	48.84	9.52
Middle	13.46	5.43	7.88	4.81	4.80	8.93	31.58	0	25.75	0	15.67	15	43.72	0
Upper Middle	4.59	0	3.79	0	4.28	0	0	0	6.35	0	5.74	0	7.44	0
Rich	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Field survey 2019-20

Note: Y -Income

3.4.1. Deprivation of the indicators among the income groups in Nagaland

The deprivation of the indicators among the various group in Nagaland is presented in Table no.3.4.1. The table showed, from BPL households; percentage of deprivation in the indicator years of schooling accounts to 47%, with similar percentage of deprivation in the indicator's sanitation, housing, assets and cooking fuel. It means that 47% of the multidimensional poor from BPL household were deprived in the indicator's years of schoolings, sanitation, housing, assets and cooking fuel. It also means, 47% of the BPL multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, proper housing, does not own assets nor do the people have access to clean cooking fuel. From the lower income group; approximately 30% of the multidimensional people are deprived in indicator years of schooling with similar percentage of deprivation in indicator housing. It means that 30% of the lower-income multidimensional poor have not completed six years of schooling nor do they have access to proper housing. Lower income multidimensional poor were also deprived in sanitation 29%, assets 27%, cooking fuel 20% and water 2%, respectively. It means, 29% of the multidimensional poor from lower income households does not have access to improved sanitation, 27% of the multidimensional poor does not own assets, 20% of the multidimensional poor does not use clean cooking fuel and 2% of the multidimensional poor were deprived in access to clean and safe drinking water. In middle-income group; approximately 3% of the multidimensional poor are deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing and assets, and 1% of the middle-income multidimensional poor were deprived in access to clean cooking fuel indicator. It means, 3% of the multidimensional poor from middle-income have not completed six years of schooling, and were also deprived in access to improved sanitation, deprived in access to proper housing nor do the people own assets and a margin of 1% of the people does not have access to clean cooking fuel. In Nagaland; upper middle-income and income rich income group does not contribute to deprivation in indicators.

The table shows in Rural areas, from BPL income group or households; 47% of the multidimensional poor were deprived in indicator years of schooling, with similar

percentage of deprivation in indicators sanitation, housing, assets and cooking fuel. No deprivation in water indicator. It means, 47% of BPL multidimensional poor have not completed six years of schoolings, does not have access to improved sanitation, does not have proper housing, nor do they have access to clean cooking fuel. From the lower-income group; 31% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation and housing. The table shows, in lower income group of Rural areas; 3% of the multidimensional poor are deprived in access to clean drinking water, 28% does not own assets and 25% does not have access to clean cooking fuel. The table shows in Rural, from middle income household; 4% of the multidimensional poor are deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing assets and cooking fuel. It means, in middle-income households; 3% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have proper housing, does not own assets nor do they have access to clean cooking fuel. In Rural areas; upper middle-income and rich income group does not contribute to deprivation in indicators.

The table shows in Urban areas, from lower income group; 22% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators housing and assets. It means, 22% of the lower-income multidimensional poor have not completed six years of schooling, does not have proper housing nor do they own assets. The table also shows, in lower income; 1% of the multidimensional poor does not have access to clean drinking water, 19% does not have access to improved sanitation, and 10% does not have access to clean cooking fuel. In Urban areas; upper middle-income and income rich income group does not contribute to deprivation in indicators, and absence of BPL income group.

Table no.3.4.1: Deprivation of the indicators among the income group in Nagaland

Income group→ Indicator↓	Nagaland			Rural			Urban	
	BPL	Lower	Middle	BPL	Lower	Middle	Lower	Middle
Schooling	47.06	29.78	2.99	47.06	33.14	3.85	22.42	2.65

Water	0	2.17	0	0	2.57	0	1.29	0
Sanitation	47.06	28.57	2.99	47.06	33.14	3.85	18.55	2.65
Housing	47.06	29.78	2.99	47.06	33.14	3.85	22.42	2.65
Assets	47.06	26.50	2.99	47.06	28.36	3.85	22.42	9.68
Cooking fuel	47.06	20.04	1.07	47.07	24.76	3.85	9.68	0

Source: Field Survey 2019-20

3.4.2. Deprivation of the indicators among the income group of Kohima district

The deprivation of the indicators among the various group of Kohima district is presented in the Table no.3.4.2. The table showed, from the lower-income group or households; 16% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation and housing. It means, in the lower income group; 16% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, nor do they access to proper housing. The table shows from lower income group; 2% of the multidimensional poor were deprived in indicator water, 11% of the multidimensional poor were deprived in assets and 7% of the multidimensional poor were deprived in cooking fuel. It means, in lower-income group; 2% of multidimensional poor does not have access to clean drinking water, 11% of the multidimensional poor does not have assets ownership and 7% does not have access to clean cooking fuel. In Kohima district; middle, upper middle-income and rich income group does not contribute to deprivation in indicators, and absence of BPL income group.

The table shows, in Kohima Rural, from the lower-income households; 16% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicator sanitation and housing. It means, 16% of the lower-income multidimensional poor have not completed six years of schoolings, does not have access to improved sanitation, nor do they have proper housing. The table shows, in lower-income household; 11% of the multidimensional poor does not own assets and 10% does not have access to clean cooking fuel.

The table showed, in Kiruphema village; absence of BPL and rich-income income group. It was observed only lower-income group contributing to the deprivation in

indicators, where, from lower-income group, 15% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation and housing. It means, in the lower income households of Kiruphema village; 15% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, nor do they have access to proper housing. The table shows in Kiruphema village, 12% of the multidimensional poor in lower-income group does not own assets and 4% of the lower-income multidimensional poor does not have access to clean cooking fuel.

In Mengujuma village; from lower-income households, 17% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing, and cooking fuel. It means, in lower income households; 17% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing, nor do they have access to clean cooking fuel. The table also showed, in lower income households; 10% of the multidimensional poor does have access to clean cooking fuel.

The table shows in Kohima Urban; from the lower-income households; 11% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing and assets. It means, 11% of the lower-income multidimensional poor have not completed six years of schoolings, does not have access to improved sanitation, does not have proper housing nor do they own assets. The table also shows, in lower-income group of Kohima Urban; 4% of the multidimensional poor does not have access to clean drinking water nor do they have access to clean cooking fuel.

The table shows under Kohima Urban, in NHAK colony; from lower-income household, 6% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators water, sanitation, housing, assets and cooking fuel. It means, in the lower income households of NHAK colony; 6% of the multidimensional poor have not completed six years of schooling, does not have access to safe and drinking water, does not have access to improved

sanitation, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel. In Forest colony; 19% of the multidimensional poor in lower-income group were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing and assets. It means,19% of the lower-income multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing and does not own assets and 4% of the lower-income multidimensional poor does not have access to clean cooking fuel.

Table no. 3.4.2: Deprivation of the indicators among the income group of Kohima district

Indicators in percentages							
Area	**Income group**	**Years of schooling**	**Water**	**Sanitation**	**Housing**	**Assets**	**Cooking fuel**
Kohima district	***BPL***	0	0	0	0	0	0
	Lower	16.16	1.87	16.16	16.16	11.01	7.03
	Middle	0	0	0	0	0	0
Rural	***BPL***	0	0	0	0	0	0
	Lower	16.43	0	16.43	16.43	10.80	10.33
	Middle	0	0	0	0	0	0
Kiruphema	***BPL***	0	0	0	0	0	0
	Lower	15.14	0	15.14	15.14	12.04	3.70
	Middle	0	0	0	0	0	0
Mengujuma	***BPL***	0	0	0	0	0	0
	Lower	17.14	0	17.14	17.14	9.52	17.14
	Middle	0	0	0	0	0	0
Urban	***BPL***	0	0	0	0	0	0
	Lower	12.21	3.74	11.21	11.21	11.21	3.74
	Middle	0	0	0	0	0	0
NHAK	***BPL***	0	0	0	0	0	0
	Lower	6.15	6.15	6.15	6.15	6.15	6.15
	Middle	0	0	0	0	0	0
Forest	***BPL***	0	0	0	0	0	0
	Lower	19.05	0	19.05	19.05	19.05	0
	Middle	0	0	0%	0	0	0

Source: Field Survey 2019-20

3.4.3. Deprivation of the indicators among the income group of Peren district

The deprivation of the indicators among the income group of Peren district is presented in Table no.3.4.3. The table showed, from BPL; 47% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage deprivation in indicators sanitation, housing, assets and cooking fuel. It means, from BPL income group or households; 47% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel. In lower income households; 34% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicator housing. It means, 34% of the lower-income multidimensional poor have not completed six years of schooling, nor do they have proper housing. The table shows, in lower income households; 2% of the multidimensional poor does not have access to clean drinking water, 33% does not have access to improved sanitation, 31% does not own assets and 24% does have access to clean cooking fuel. The table shows, in the middle- income households; 5% of the multidimensional poor are deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing, and asset. It means, 5% of the middle-income multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing, nor do they own assets. The table shows, 2% of the middle-income multidimensional poor does not have access to clean cooking fuel. In Peren district; upper middle-income and rich income group does not contribute to deprivation in indicators.

The table shows, in Peren Rural, from the BPL; 47% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing, assets and cooking fuel. It means, 47% of the BPL multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel. It was observed, in the lower-income households; 36% of the multidimensional poor were deprived in indicator years of schooling with similar percentage of deprivation in the indicator's sanitation

and housing. It means, 36% of the lower-income multidimensional poor have not completed six years of schoolings, does not have access to improved sanitation nor do they have access to proper housing. The table shows in Peren Rural, from lower-income group; 32% of the multidimensional poor does not own assets, 27% does not have access to clean cooking fuel and 3% does not have access to clean drinking water. The table shows, in middle-income group; 5% of the multidimensional poor are deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing assets and cooking fuel. It means, in middle-income group; 5% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have proper housing, does not own assets nor do they have access to clean cooking fuel.

The table showed, in Samzuiram village; from BPL households; 47% of the multidimensional poor are deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing, assets and cooking fuel. It means, 47% of the BPL multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have proper housing, does not own assets nor do they have access to clean cooking fuel. The table shows, from lower income group or household in Samzuiram village; 37% of the multidimensional poor were deprived in indicator years of schoolings, with similar percentage of deprivation in the indicator's sanitation and housing. It means, 37% of the lower-income multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, nor do they have access to proper housing. The table shows, in lower-income group; 31% of the multidimensional poor does not own assets and 27% does have access to clean cooking fuel. The table shows, in the middle-income group; 9% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators sanitation, housing, asset and cooking fuel. It means, 9% of the multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel.

In New Poilwa village, from the lower-income group; 34% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing, assets and clean cooking fuel. It means, 34% of the lower-income multidimensional poor have not completed six years of schooling, does not have improved sanitation, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel.

The table shows in Peren Urban, from the lower-income households; 28% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's housing and assets. It means, 28% of the lower-income multidimensional poor have not completed six years of schooling, does not have access to proper housing, nor do they own assets. In the lower-income households; 22% of the multidimensional poor does not have access to improved sanitation and 13% does not have access to clean cooking fuel. The table shows, in middle-income group; 6% of the multidimensional poor were deprived in indicator years of schooling with similar percentage of deprivation in the indicator's sanitation, housing and assets. It means, 6% of the middle-income multidimensional poor have not completed six years of schoolings, does not have access to improved sanitation, does not have access to proper housing nor do they own assets.

The table shows in Midland colony, from lower-income group; 35% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators housing, and assets. It means, in lower income group; 35% of the multidimensional poor have not completed six years of schooling, does not have access to proper housing, nor do they own assets. The table shows, in lower income households; 30% of the multidimensional poor does have access to improved sanitation and 14% of the multidimensional poor does not have access to clean cooking fuel. The table shows, in middle-income households; 15% of the multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in the indicator's sanitation, housing and assets. It means, 15% of the middle-income multidimensional poor have not completed six years of schooling, does not have access to improved sanitation, does not have proper housing nor do they own assets. In Stadium colony, from lower-income households; 10% of the

multidimensional poor were deprived in indicator years of schooling, with similar percentage of deprivation in indicators housing, assets and cooking fuel. It means, 10% of the lower-income multidimensional poor have not completed six years of schooling, does not have access to proper housing, does not own assets nor do they have access to clean cooking fuel.

Table no. 3.4.3: Deprivation of the indicators among the income group of Peren district

Indicators in percentages							
Area	**Income group**	**Years of schooling**	**Water**	**Sanitation**	**Housing**	**Assets**	**Cooking fuel**
Peren district	**BPL**	47.06	0	47.06	47.06	47.06	47.06
	Lower	34.17	2.25	32.63	34.17	30.76	23.62
	Middle	5.43	0	5.43	5.43	5.43	1.94
Rural	**BPL**	47.06	0	47.06	47.06	47.06	47.06
	Lower	36.24	3.05	36.24	36.24	31.62	27.44
	Middle	4.81	0	4.81	4.81	4.81	4.81
Samzuiram	***BPL***	47.06	0	47.06	47.06	47.06	47.06
	Lower	36.49	0	36.49	36.49	31.42	26.82
	Middle	8.93	0	8.93	8.93	8.93	8.93
New Poilwa	***BPL***	0	0	0	0	0	0
	Lower	33.65	33.65	33.65	33.65	33.65	33.65
	Middle	0	0	0	0	0	0
Urban	***BPL***	0	0	0	0	0	0
	Lower	28.33	0	22.41	28.33	28.33	12.81
	Middle	5.84	0	5.84	5.84	5.84	0
Midland	***BPL***	0	0	0	0	0	0
	Lower	34.88	0	30.23	34.88	34.88	13.95
	Middle	15	0	15	15	15	0
Stadium	***BPL***	0	0	0	0	0	0
	Lower	9.52	0	0	9.52	9.52	9.52
	Middle	0	0	0	0	0	0

Source: Field Survey 2019-20

Thus, in terms of deprivation of the indicators among the income group in Nagaland; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where BPL, lower-income, and middle-income group shows deprivations. The highest percentage of deprivation was from BPL income group, followed by lower-income group and middle-income group. No deprivation was

observed from upper middle-income and rich-income group. From BPL income group; the highest percentage of deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation 47%. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling and housing with similar percentage of deprivation (30%), followed by indicator sanitation (29%), assets (26%), cooking fuel (20%) and water (1%). From the middle-income group; the highest percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (3%), followed by cooking fuel (1%).

In rural; in terms of deprivation of the indicators among the income group; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where BPL, lower-income, middle-income group shows deprivations. The highest percentage of deprivation was from BPL income group, followed by lower and middle. No deprivation was observed from upper middle-income and rich-income group. From BPL income group; the highest percentage of deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%). No deprivation in indicator water. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (33%), followed by indicator assets (28%), cooking fuel (25%) and water (3%). From the middle-income group; the highest percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (1%). No deprivation in indicator water.

In Urban; in terms of deprivation of the indicators among the income group; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where, lower-income, middle-income group shows deprivations. The highest percentage of deprivation was from lower-income group, followed by middle-income group. No deprivation was observed from upper middle-income and rich-income group, and absence of BPL income group. From the lower-income group; the

highest percentage of deprivation was from indicator years of schooling, sanitation, housing and assets with similar percentage of deprivation (22%), followed by indicator cooking fuel (10%) and water (1%). From the middle-income group; the percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (3%). No deprivation in indicator water and cooking fuel.

In Kohima district, in terms of deprivation of the indicators among the income group; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (16%), followed by indicator assets (11%), cooking fuel (7%) and water (2%). In Kohima Rural, indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (16%), followed by indicator assets (11%), cooking fuel (10%). No deprivation in indicator water. In Kiruphema village; indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (15%), followed by indicator assets (12%), cooking fuel (4%) and water (3%). No deprivation in indicator water. In Mengujuma village, indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing and cooking fuel with similar percentage of deprivation (17%), followed by indicator assets (10%). No deprivation in indicator water.

In Kohima Urban, indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows

deprivations. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling (12%), followed by indicator sanitation, housing, and assets, with similar percentage of deprivation (11%) and indicator water and cooking fuel with similar percentage of deprivation (4%). In NHAK colony, indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the percentage of deprivation s from indicator years of schooling, water, sanitation, housing, assets and cooking fuel with similar percentage of deprivation (6%). In Forest colony; indicators years of schooling, sanitation, housing, and assets contributed to deprivation, where only lower-income, middle-income group shows deprivations. From the lower-income group; the percentage of deprivation from indicator years of schooling, sanitation, housing and assets with similar percentage of deprivation (20%). No deprivation in indicator water and cooking fuel.

In district Peren; in terms of deprivation of the indicators among the income group; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where BPL, lower-income, middle-income group shows deprivations. The highest percentage of deprivation was from BPL income group, followed by lower-income and middle-income group. No deprivation was observed from upper middle-income and rich-income group. From BPL income group; the highest percentage of deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%). No deprivation in indicator water. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, and housing with similar percentage of deprivation (34%), followed by indicator sanitation (33%), indicator assets (31), cooking fuel (23%) and water (2%). From the middle-income group; the highest percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (5%), followed by indicator cooking fuel (2%). No deprivation in indicator water.

In Peren Rural; indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where BPL, lower-income, middle-income

group shows deprivations. The highest percentage of deprivation was from BPL income group, followed by lower-income and middle-income group. No deprivation was observed from upper middle-income group. From BPL income group; the percentage of deprivation from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%). No deprivation in indicator water. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (36%), followed by indicator assets (32%), cooking fuel (27%) and water (3%). From the middle-income group; the percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (5%). No deprivation in indicator water.

In village Samzuiram, indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, where BPL, lower-income, middle-income group shows deprivations. The highest percentage of deprivation was from BPL income group, followed by lower-income and middle-income. No deprivation was observed from upper middle-income group. From BPL income group; the percentage of deprivation from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%). No deprivation in indicator water. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (36%), followed by indicator assets (31%), cooking fuel (27%). No deprivation in indicator water. From the middle-income group; the percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (9%). No deprivation in indicator water.

In village New Poilwa, indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the percentage of deprivation from indicator years of schooling, water, sanitation, housing and cooking fuel, with similar percentage of deprivation (34%).

In Peren Urban, indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, where lower-income, and middle-income group shows deprivations. The highest percentage of deprivation was from lower-income group, followed by and middle-income group. No deprivation was observed from upper middle-income group, and absence of BPL and rich-income group. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, housing and assets, with similar percentage of deprivation (28%), followed by indicator sanitation (22%), and cooking fuel (13%). No deprivation in indicator water. From the middle-income group; the percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (6%). No deprivation in indicator water and cooking fuel.

In Midland colony, indicators years of schooling, sanitation, housing, assets and cooking fuel contributed to deprivation, lower-income, and middle-income group shows deprivations. The highest percentage of deprivation was from lower-income group, followed by middle-income group. No deprivation was observed from upper middle-income group. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, housing and assets, with similar percentage of deprivation (35%), followed by indicator sanitation (30%), and indicator cooking fuel (14%). From the middle-income group; the percentage of deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (15%). No deprivation in indicator water and cooking fuel. In Stadium colony, indicators years of schooling, water, sanitation, housing, assets and cooking fuel contributed to deprivation, where only lower-income group shows deprivations. From the lower-income group; the percentage of deprivation from indicator years of schooling, housing, assets and cooking fuel with similar percentage of deprivation (10%). No deprivation in indicator water and sanitation.

Chapter 4

FINDINGS AND CONCLUSION

This chapter highlighted the findings and observations of education, health and standard of living deprivation of Nagaland, where the analysis was conducted at multiple levels: State, District (Kohima and Peren), Rural (villages)-Urban (colonies), and, the assessment of poverty through the MPI. The chapter concluded by suggesting/recommending measures to tackle the problem of multidimensional poverty in Nagaland.

4.1. FINDINGS AND OBSERVATIONS

The finding of the analysis is as follows

4.1.1. Educational Institutions in Nagaland

The study from the secondary data (Table no.2.1.1.2) showed, in Nagaland there were 1932 Government schools in general, with a total of 14802 teachers, and an enrolment of 114,339 students, which were higher in number as against the number of private schools (763), with a total of 7640 teachers and an enrolment of 226,285 students. It is overwhelming to see higher number of students enrolled in Private institutions than Government institution, though Government institutions were higher in number as compared to the Private institutions.

From the study, it was observed there were 1030 Government Primary School; with a total of 8380 teachers, and an enrolment of 55957 students, as against 128 Private Primary School; with 3457 teachers and an enrolment of 105313 students, 609 Government Middle School; with 4072 teachers and an enrolment of 30496 students, as against 300 Private Middle School; with 1750 teachers and an enrolment of 57593 students, 249 Government High School; with 1715 teachers and an enrolment of 16537 students, as against 323 Private High School; with 1632 teachers and an enrolment of 36637 students, and 44 Government Higher Secondary School; with 635 teachers and an enrolment of 11349 students as against 12 Private Secondary School; with 801 teachers, and an enrolment of 26742 students. It was observed, higher number of students were enrolled in Private institutions than Government institution, though

Government institutions have higher number of schools and teachers as compared to the Private institutions. A decreasing pattern in enrolments both in Government and Private institutions was observed as the class goes up.

The study also observed the Pupil Teacher Ratio for the state as 9 for primary, 7 for upper primary, 16 for secondary and 16 for higher secondary. It means 9 students for every one teacher in Primary class, 7 students for every one teacher in Middle/Upper Primary class, 16 students for every one teacher in Secondary class and 16 students for every one teacher in Higher Secondary class.

4.1.2. Educational Institutions in Rural and Urban (Sample)

The study from the primary survey along with secondary data observed (Table no.2.1.1.3) that, in Rural; there were 10 Government institutions; with a total of 74 teachers, and an enrolment of 566 students, which was found to be higher in number as against Urban with 1 Government School; 27 teachers and an enrolment of 291 students. The study observed that in Rural, there were 4 Government Primary Schools; with 19 teachers and an enrolment of 145 students, as against Urban areas who lack Government Primary institutions, 5 Government Middle School; with 41 teachers and an enrolment of 418 students, as against Urban who lacks Government Middle School, and 1 Government High School; with 14 teachers and an enrolment of 71 students, as against Urban with 1 Government High School; with 27 teachers, and an enrolment of 291 students. It was observed Rural and Urban has one Government High School each, but Urban has higher number of teachers and enrolment of students as against Rural.

The study observed that, both Kohima Rural and Peren Rural have 5 Government Schools in total. In Kohima Rural, with 36 teachers and an enrolment of 191 students, which was found to be lower in number than Peren Rural of 38 teachers, and an enrolment of 372 students. It was observed in Kohima Rural, 3 Government Primary School; with 12 teachers and an enrolment of 120 students as against, Peren Rural with 1 Government Primary School; 7 teachers and an enrolment of 25 students, one Government Middle School; with 10 teachers and an enrolment of 43 students, as against, Peren Rural with 4 Government Middle School; 31 teachers and an enrolment of 375 students, and 1 Government High School; with 14 teachers, and an enrolment

of 71 students, whereas, Peren Rural lack Government High School as per the study sample.

It was observed in Kohima Urban, one Government High school; with 27 teachers and an enrolment of 291 students, as against Peren Urban, with no government institutions.

4.1.3. Educational Institutions in Kohima district

The study observed, in Kohima district (Table no.2.1.1.4), there were a total of 167 Government Schools; with 2015 teachers and an enrolment of 9218 students which was found to be higher in number as against Peren district (Table no.2.1.1.5) of 132 Government Schools; with 853 teachers, and an enrolment of 4906 students. It was observed, there were 88 Government Primary School; with 870 teachers and an enrolment of 4425 students, 53 Government Middle School; with 700 teachers and an enrolment of 3177 students, and 16 Government High School; with 324 teachers and an enrolment of 1616 students.

In Kohima Rural, there were 5 Government School; with 36 teachers and an enrolment of 191 students, comprising of 3 Government Primary School; with 12 teachers and an enrolment of 120 students, 1 Government Middle School; with 10 teachers and an enrolment of 43 students, and 1 Government High School; with 14 teachers and an enrolment of 71 students. In Kiruphema village, 4 Government Schools; with 26 teachers and an enrolment of 191students, which was found to be higher in number as against Mengujuma village of 1 Government School; with 10 teachers and an enrolment of 43 students. In Kiruphema village, 3 Government Primary School; with 12 teachers and an enrolment of 120 students, and 1Government High School; with 14 teachers and an enrolment of 71 students, whereas, in Mengujuma village, one Government Middle School; with 10 teachers and an enrolment of 43 students.

In Kohima Urban, there is one Government School; with 27 teachers and an enrolment of 291 students, which was observed to be in Forest colony; one Government High school whereas, in NHAK colony; no government institutions.

4.1.4. Educational Institutions in Peren district

The study observed (Table no.2.1.1.5), there were in total 132 Government Schools; with 853 teachers and, an enrolment of 4906 students, comprising of 73 Government

Primary School; with 390 teachers and an enrolment of 3773 students, 46 Government Middle School; with 294 teacher and an enrolment of 2200 students, and 15 High school; with 136 teachers and an enrolment of 913 students.

In rural, there were a total of 5 Government School; with 76 teacher and an enrolment of 400 students, comprising of one Government Primary School; with 7 teachers and an enrolment of 50 students, 4 Government Middle School; with a total of 31 teachers and an enrolment of 375 students. In Samzuiram village, 3 Government Middle School; with a total of 24 teachers, and an enrolment of 348 students. In New Poilwa village, 2 Government Schools; with a total of 52 teachers and an enrolment of 77 student. In Government Primary School; with7 teachers, and an enrolment of 50 students, and in Government Middle School; with 7 teachers with an enrolment of 27 students. It was observed under Peren Urban; Midland colony and Stadium colony lack Government school in their vicinity. It is to be noted in Peren Urban; there is no government institutions, particularly in the colonies under study i.e., Midland and Stadium colony.

The study (Table no.2.1.1.4 & Table no.2.1.1.5) observed, Kiruphema village have the highest number of Government School (4), followed by Samzuiram village (3), New Poilwa village (2) and, Mengujuma village (1), respectively. It was observed, Mengujuma village and Samzuiram village lacks Government Primary and Government High School, Kiruphema village lacks Government Middle School, New Poilwa village lack Government High School. It was observed for Government Primary school; Kiruphema village (3) have higher number of schools; with 12 teachers and an enrolment of 120 students as against New Poilwa village with 1 Government Primary School; with 7 teachers and an enrolment of 50 students. For Government Middle School; Samzuiram village (3) has higher number of schools, as against Mengujuma village and New Poilwa village of one. The number of teachers was also found to be higher in Samzuiram village (24), as against Mengujuma village (10) and New Poilwa village (7), respectively, with a higher enrolment in Samzuiram village (348), as against Mengujuma village (43) and New Poilwa village (27), respectively. It is to be noted that absence of Government Primary School in Samzuiram village and Mengujuma village, absence of Government Middle School in

Kiruphema village, and absence of High school in Mengujuma village, Samzuiram village and New Poilwa village.

4.2.1. Literacy rate of Nagaland

The study from the secondary data (Table no.2.2.1) observed, the literacy rate of Nagaland as 80% which was found to be higher than the literacy rate of Rural (75%), but lower than the literacy rate of Urban (90%). It was also observed, Nagaland literacy rate (80%), was higher than Peren district literacy rate of 78% but lower than the literacy rate of Kohima district (85%). The study observed Nagaland male literacy rate of 83% was higher than female literacy rate of 76%. In Nagaland, male literacy rate (83%), was higher than Rural male literacy rate (79%), but lower than Urban male literacy rate of 92%. In Nagaland, female literacy rate of 76%, was found to be higher than Rural female literacy rate of 72% but lower than Urban female literacy rate of 87%.

The study also observed Nagaland; male literacy rate (83%) was similar in percentage with Peren district; male literacy rate (83%) but was found to be lower than Kohima district; male literacy rate (89%). Nagaland; female literacy rate (76%) was found to be lower than Kohima district; female literacy rate of 82% but higher than Peren district; female literacy rate of 73%.

The study observed that, literacy rate of Urban areas (90%) was higher than Kohima district (85%), followed by Nagaland (80%), Peren district (76%) and, Rural areas (75%), respectively. It was observed, the literacy rate of male was higher in Urban (92%) than Kohima district (87%), followed by both Nagaland and Peren district with similar percent (83%), and Rural (79%), respectively. The study observed, Urban female literacy rate (87%), was higher than Kohima district (81%), followed by Nagaland (76%), Peren district (73%), and Rural (72%), respectively. The observation implied that population were more literate in Urban areas than Rural areas, male to be more literate than female, Kohima district to be more literate than Peren district, and, Urban areas more literate than Nagaland in general.

4.2.2. Literacy rate of Kohima district

The study from the secondary data (Table no.2.2.2) observed, Literary rate of Kohima district as 85%, male literacy rate was 89% and female literacy rate to be 81%. It indicated, male to be more literate than female. Kohima Rural literacy rate was observed to be 81% which was lower in percent than the district itself (85%) and Kohima Urban literacy rate (90%). It indicated, in Kohima district; Urban population were more literate than Rural population and the district itself. In village Kiruphema Bawe; 90% of the population were literate, which was higher than the literacy rate of Mengujuma village (86%). It was observed literacy rate of male was marginally higher in Kiruphema village (92%) than Mengujuma village (91%), and female literacy rate of Kiruphema village (89%) was found to be higher than Mengujuma village (82%). It is to be noted, the literacy rate of Kohima Urban (NHAK and Forest colony) as a secondary source of data was unavailable.

4.2.3. Literacy rate of Peren district

It was observed from the secondary data (Table. no.2.2.3) Literary rate as 78%, male literacy rate as 83% and female literacy rate as 73%. It indicated, male to be more literate than female. It was observed the literacy rate of Peren Rural as 77%, which was found to be lower in percent than the district as a whole (78%) and Peren Urban (86%). It indicated, Urban population were more literate than Rural population and the district itself.

In Samzuiram village; 87% of the population were literate, which was higher than the literacy rate of New Poilwa village (72%). It was observed literacy rate of male was relatively much higher in Samzuiram village (92%) than New Poilwa village (80%), and female literacy rate of Samzuiram village (83%) was found to be relatively much higher than New Poilwa village (64%). It was observed; Kohima Rural (81%) were more literate than Peren Rural (77%). It is to be noted, the literacy rate of Peren Urban (Midland and Stadium colony) as a secondary source of data was unavailable.

4.3.1. Education deprivation in Nagaland

The study from the primary survey data (Table. no.2.3.1) observed, 46% of the households in Nagaland were deprived in indicator years of schooling, which was found to be higher than Rural deprivation of 45%, but lower than Urban deprivation of 47%. The study observed that, Nagaland, Kohima district and Peren district shared similar percentage of deprivation in indicator years of schooling. It indicated that, the highest deprivation in indicator years of schooling was observed in Urban areas (47%), followed by Nagaland, both Peren and Kohima district with similar percentage of deprivation (46%), and Rural (45%), respectively. The study revealed, Urban face higher percent of deprivation than Rural, and both the districts faced similar percentage of deprivation. The second indicator showed absence of deprivation, which was a positive indication that all school aged child were attending school in Nagaland as per the study.

The study from primary survey data (Table no. 2.3.1) observed deprivation in indicator years of schooling based on uncensored headcount ratio, where it was found that, 40% of the households in Rural were deprived in indicator years of schooling, which was higher than Urban areas (39%), and Kohima district (25%), but lower than Peren district (46%). The highest deprivation was observed in Peren district (46%), followed by Rural (40%), Urban (39%) and Kohima district (25%). The study revealed, Rural faced higher percent of deprivation than Urban, and Peren district faced higher percent of deprivation than Kohima district. The second indicator showed absence of deprivation, which was a positive indication that all school aged child were attending school in Nagaland as per the study.

4.3.2. Education deprivation of Kohima district

The study from the primary survey data observed (Table no.2.3.2), 46% of the households in Kohima Rural were deprived in indicator years of schooling, which was found to be marginally lower in deprivation than Kohima Urban (47%). It indicated, Kohima Urban have marginally higher percent of deprivation than Kohima Rural. It was observed, in Kiruphema village; 50% of the households were deprived in indicator years of schooling which was found to be higher in deprivation, as against Mengujuma

village of 45%. In Forest colony; 50% of the households were deprived, which was higher in deprivation than NHAK colony of 37%. The study revealed, Kiruphema village faced higher percent of deprivation than Mengujuma village, Forest colony faced higher percent of deprivation than NHAK colony, Kohima Urban face higher percent of deprivation than Kohima Rural. The second indicator showed absence of deprivation, which was a positive indication that all school aged child were attending school in Kohima district.

The study from primary survey data based on uncensored headcount ratio observed (Table.2.3.2), 25% of the households in Kohima district were deprived in indicator years of schoolings i.e. have not completed six years of schooling. It is observed, Mengujuma village have relatively much higher percentage of deprivation (47%), as compared to Kiruphema village (36%). In Forest colony; 32% of the households were deprived, which was found to be relatively much higher in deprivation as compared to NHAK colony, whose 12% households have not completed six years of schoolings. The study revealed, Kohima Rural faced higher percent of deprivation than Kohima Urban, Mengujuma village faced higher percent of deprivation than Kiruphema village, Forest colony faced higher percent of deprivation than NHAK colony. The second indicator showed absence of deprivation, which is a positive indication that all school aged child were attending school.

4.3.3. Education deprivation of Peren district

From the primary survey data (Table no.2.3.3) it was observed, 46% of the households in Peren district were deprived in indicator years of schoolings i.e. have not completed six years of schooling. In Peren Rural; 54% of the households were deprived in indicator years of schooling, which was found to be relatively much higher in deprivation than Peren Urban (48%). It was observed, in Samzuiram village; 46% of the households were deprived in indicator years of schooling which was relatively much higher in deprivation than New Poilwa village of 38%. Stadium colony contributed higher percentage of deprivation (50%), as against Midland colony of 48%. The study indicated Peren Rural faced higher percent of deprivation than Peren Urban, Samzuiram village face higher percent of deprivation than New Poilwa village,

Stadium colony face higher percent of deprivation than Midland colony. The second indicator showed absence of deprivation, which was a positive indication that all school aged child were attending school in Peren district as per the study.

The study from primary survey data observed (Table no.2.3.3) based on uncensored headcount ratio in Peren Rural; 41% of the households were deprived in indicator years of schooling, which was found to be lower in deprivation than Peren Urban (55%). In Samzuiram village; 43% of the households were deprived, which was found to be higher in deprivation than New Poilwa village; whose 31% of the households have not completed six years of schooling. In Midland colony; 63% of the households were deprived, which was found to be relatively much higher in deprivation, as compared to Stadium colony; whose 40% of the households have not completed six years of schooling. The study indicated Peren Urban faced higher percent of deprivation than Peren Rural, Samziurma village face higher percent of deprivation than New Poilwa village, Midland colony face higher percent of deprivation than Stadium colony. The second indicator showed absence of deprivation, which was a positive indication that all school aged child were attending school in Peren district as per the study. It is to be noted; the study observed a huge difference between censored headcount ratio, and uncensored headcount ratio.

4.4.1. Medical Institutions of Nagaland

The study from the secondary data (Table no.2.4.1) showed in Nagaland; there were 12 District Hospital (1100 Beds), 2 TB Hospital (100 Beds), 1 Mental Hospital (25 Beds), 34 Community Health Centre (630 Beds), 142 Primary Health Centre (756 Beds), 577 Subsidiary Health Centre (290 Beds), and 16 Private Hospitals. It was observed in Nagaland; medical practitioners comprising of 290 General Doctors, 136 Specialist Doctors, 82 Nursing Sister, 713 Nurses, 1477 ANM/FHW, and, 363 pharmacists. It was reported; the Doctor Patient Ratio to be 1:4056, i.e., “Only 1 Doctor for every 4,056 people in Nagaland (India, 2024), which is to be noted.

4.4.2. Medical Institutions of Rural and Urban (Sample)

The study from the primary survey along with secondary data (sample study, Table no.2.4.2) observed, Rural population does not have the facility of Government nor

private hospital, their medical needs are met by 1 Primary Health Centre (6 Beds) and 2 Subcenters. The Medical practitioners in Rural comprising of 2 Doctor Generals, 2 ANM, 2 FHW and 2 pharmacists. It is also seen in Urban areas; the medical care and needs are provided by one District hospital (317 Beds), one T.B Hospital (50 Beds), one Mental Hospital (25 Beds), 6 Private hospitals and one Sub-centre. The medical practitioners comprising of 30 Doctors General, 20 Doctor Specialist, 10 Nursing Sister, 60 Staff Nurse, 54 ANM/FHW, and, 2 pharmacists.

The study observed, the population of Urban areas to be more privileged than the population of Rural areas. It is also to be noted that, according to the Ministry of Health and Family Welfare in 2019; the number of Primary Health Centres (PHCs) functioning in Nagaland were 131 i.e., 126 Primary Health Centres were functioning in Rural areas and 5 in urban areas. It has been reported, Nagaland faced challenges due to "inadequate healthcare facilities, especially in remote and hilly regions i.e., rural and marginalized communities" unlike Urban areas which are better off. There is also shortfall of health care professionals in rural areas (Nagaland Post, September 21 2023 Healthcare Landscape in Nagaland: Challenges and Progress). The study observed that, Urban have better medical facilities than Rural.

4.4.3. Medical Institutions of Kohima district

The study from Primary survey data along with secondary data (Table no.2.4.3) observed, in Kohima District; there were 3 Government Hospitals, comprising of one District Hospital (317 Beds), 1 TB Hospital (50 Beds), and 1 Mental Health Hospital (25 Beds), 6 Private Hospitals, 3 Community Health Centres (36 Beds), 18 Primary Health Centres (84 Beds), and 43 Subcentres. Medical practitioners comprising of 48 Doctor Generals, 56 Doctor Specialist, 26 Nursing Sister, 79 Staff Nurse, 131 ANM/FHW and 69 pharmacists. It was observed, there was one Subcentre in Kiruphema village, and in Mengujuma village; no Government medical institutions. Medical practitioners in Kiruphema village comprising of one Doctor General, one ANM, and one pharmacist. It was observed in Kohima Urban; 3 Government Hospital i.e., one District Hospital, one T.B Hospital and one Mental hospital, and 1 subcentre. In NHAK colony; there is one District Hospital and Medical practitioners comprising of 30 Doctor Generals, 20 Doctor Specialist, 10 Nursing sister, 60 Staff Nurse, 50

ANM/FHW and 2 pharmacists. In Forest colony; one Subcentre and medical practitioners comprising of 4 ANM Nurses. The study observed that Kohima Urban have better medical facilities than Kohima Rural, and it is to be noted in Mengujuma village absence of medical institutions.

4.4.4. Medical Institutions of Peren district

The study from primary survey data along with secondary data observed (Table no.2.4.4), there is one District Hospital (50 Beds), one Community Health Centre (12 Beds), 9 Primary Health Centre (54 Beds), and 16 Subcentres providing basic healthcare to the local population and surrounding areas. Medical practitioners comprising of 11 Doctor Generals, 6 Doctor Specialist, 1 Nursing Sister, 10 Staff Nurse, 39 ANM/FHW and 16 pharmacists. In Peren Rural, one Subcentre and one Primary Health Centre and Medical practitioners comprising of 2 Doctor General, 2 ANM and 2 FHW and 2 pharmacists. It was observed, there is one Subcentre in Samzuiram village, and one Primary Health Centre (6 Beds) in New Poilwa village. In Samzuiram village, medical practitioners comprising of 1 Doctor General, 1 ANM, 1 FHW and one pharmacist, and in New Poilwa village; one Doctor General, 1 ANM, 1 FHW and one pharmacist. In Midland and Stadium colony; there was no medical institutions. It indicated, absence of medical institutions in Peren Urban. The study observed that Peren Rural have better medical facilities than Peren Urban.

4.5.1. Health deprivation in Nagaland

The study from primary survey observed that in Nagaland there was no deprivation in health dimensions, i.e., absence of indicator nutrition and child mortality. It means, no any member of the households in Nagaland was found to be malnourished nor there was loss of any child during the last five years prior to the study. It was a reflection of positive parameter.

4.6.1. Housing Amenities Information of Nagaland

i. The study observed (Table no.2.6.1) from the secondary date that, approximately 96% of the households in Nagaland have electricity for domestic use, similar percentage was shared by the Rural areas (96%) which

was found to be marginally lower than the Urban (98%). The study observed according to NFHS-5; 99% of the households in Nagaland have electricity connection, and according to Census 2011; in Rural areas, approximately 75% of households used electricity for lighting and in Urban, 7% of households used electricity for lighting. The Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) was implemented to provide access to electricity for all rural and BPL households/families. It is to be noted NSS does not report on the number/percentage of households that have been electrified.

ii. In terms of indicator sanitation; 98% of the population in Nagaland live in households with improved toilet, which was found to be marginally higher than Rural (97%) and marginally lower than Urban (99.8%). It was observed, almost all the households in Nagaland have access to toilet. But the study observed that, according to NFHS-5 in Nagaland; less than 1 % of households do not have toilet facility, they use open spaces or fields, and 4% of the households use unimproved facility. In Rural areas; 0.5% of the households have no facility and use open spaces or field for defecation, and 5% of the population use unimproved facility. In Urban areas; 0.3% of the population have no facility and use open spaces or field for defecation, and 1.7% use unimproved facility. The observation of the study implied that, the state has not been able to make it a zero-defecation state, where hygiene is still compromised.

iii. In terms of indicator drinking water, in Nagaland; 72% of the household have drinking water facilities within the household premise, 40% of the households have access to water within their dwellings, 28% of the households have access to pipe water into their dwellings, and approximately 30% of the households does not have sufficient drinking water throughout the year from the main source of drinking water. In Rural, approximately 65% of the population live in household having drinking water facilities within the household premise, 32% of the population have access to drinking water within their dwellings ,22% of the population have pipe water connection in their dwellings and approximately and, 27% of the population does not have sufficient drinking water throughout the year from the main source of drinking water. In Urban,

approximately 88% of the people in live in household having drinking water facilities within the household premise, 58% of the households have access to drinking water within their dwellings, approximately 41% of the households have pipe water connection in their dwellings, and 37% of the households in Urban does not have sufficient drinking water throughout the year from the main source of drinking water.

The study from the secondary data (NFHS-5); about 89% of households of Nagaland have basic drinking water service, 91% of households use an improved source of drinking water, but only 46% have water piped into their dwelling, 81.7% of the households have access to water on their premises/dwellings, 15% of the households take less than 30 minutes to fetch water and 3.1% of the households takes 30 minutes or longer to fetch water and 95% of households use an appropriate treatment method to make water drinkable which was done mostly by boiling. In rural; 43% of the households have water piped into their dwelling, which was found to be lower than Urban households (52%). In Rural; 87.6% of the households have basic drinking water service, which was found to be lower than Urban areas (92.8%). It was observed, in Rural areas; 76.6% of the households have water on their premises/dwellings, which was found to be much lower than Urban areas (92.4%). In Rural areas; 19% of the households have water less than 30 minutes of their dwellings which was relatively much higher in percent than Urban areas (6.5%). It was also observed, in Rural areas; 4.2% of the households takes thirty minutes or longer to fetch water in their dwellings which was lower in percent as against Urban areas (6.5%).

iv. The study from secondary data (Table no.2.6.1) NSS 76 Round in terms of indicator housing it was observed; 81% of the household in Nagaland live in their own dwellings, which was found to be much lower in percent than Rural areas where; 90% of the household live in their own dwellings but higher in percent than Urban; where 60% of the household live in their own dwellings. In Nagaland; 14% of the household live in hired dwellings, which was found to be higher than the Rural whose 3% of the household live in hired dwellings but relatively much lower in percent than the Urban whose 38% of the

household live in hired dwellings. It was also observed that, approximately 63% of the households in Nagaland lived in pucca house, 17% of the households live in kutcha house, and 20% of the households live in semi pucca house. In Rural; 58% of the households which was found to be much lower in percent as against Urban; whose 74% of the household live in pucca housing. In Rural, approximately 23% of the household, which was found to be relatively much higher in percent than Urban whose 5% of the household live in kutcha house. In Rural, approximately 20% of the household and approximately 21% of the household in Urban live in semi pucca house.

The study from secondary data NFHS-5 (2019-21) observed that in Nagaland 8% of the households live in kutcha house which was found to be lower in percent than Rural (10.4%) but higher in percent than Urban (2.9%). It revealed that, 10.4% of the households live in kutcha house which was found to be higher than Nagaland, followed by Urban. It was observed in Nagaland; 34% of the household, in Rural; 22.2% of the households and in Urban; 57.1% of the households live in pucca housing. It revealed that, 57.1% of the households live in pucca house which was found to be higher in percent than Nagaland, followed by Rural. It was also observed; in Nagaland, 34% of the households, in Rural; 66.8% of the households and in Urban; 39.8% of the households live in semi-pucca housing. It revealed that 66.8% of the households in Rural live in semi pucca housing which was found to be higher in percent than Urban, followed by Nagaland, respectively.

v. The study from the secondary data (NFHS-5) in term of indicator assets, in Nagaland, about 58% of the total households possessed or owns TV, 12% of the households owns radio, 94% of the households owns mobile, 55% of the households have internet connection, 13% of the households owns computer, 26% of the households owns refrigerator, 5.5% of the households owns bicycle, 17% of the households owns motorcycle or scooter, 21% of the households owns car. It was also reported, in Nagaland; 7.78% of the family in Nagaland owned car while 6.32% owned two -wheeler. In Rural areas; 86% of the households owns house which was found to be higher in percent than Urban (55%). In Rural areas; about 93% of the households have mobile phone, which

was found to be lower than urban households (98%). In Rural areas; 13% of the households possess or owns radio or transistor, 48.6% of the households owns TV, 44.2% of the households use internet, 6.7% of the households owns computer, 17% of the households owns refrigerator, 4.6% of the households owns bicycle, 14.3% of the households owns motorcycle or scooter, 16.1% of the households owns car whereas, in Urban areas; 8.2% of the households owns radio or transistor, 79% of the households owns TV, 77.5% of the households owns internet, 25.5% of the households owns computer, 46.2% of the households owns refrigerator, 7.6% of the households owns bicycle, 21.7% of the households owns motorcycle or scooter and 32.1% of the households owns car. It is to be noted NSS does not report on assets ownership.

vi. The study from secondary data of NSS 76 round (Table no.2.6.1) observed that in terms of cooking fuel indicator, only 37.8% of the households in Rural use LPG as cooking fuel which was found to be much lower in percent than Nagaland (51%) in general, followed by Urban (78%). It also revealed, Urban households depend on LPG as cooking fuel more than Rural households and Nagaland in general. In Rural; 61% of the households use firewood, chips and crop residue as cooking fuel, which was found to be much higher in percent than Nagaland in general (48%), and Urban (20%). It was also observed, in Urban; 0.8% of the households use kerosene as cooking fuel which was found to be marginally lower in percent than Nagaland in general (0.3%). Rural households do not use kerosene as cooking fuel.

It was observed from the secondary data (NFHS-5) in Nagaland, about 43% of the households use clean fuel for cooking, where, about 3% of the households use electricity for cooking, approximately about 40% use LPG for cooking, 0.2% of the household use kerosene and about 57% of the households use wood for cooking. In Rural areas; 2.1% of the population use electricity, 22.2% use LPG, 0.1% use kerosene, 74.7% use wood as cooking fuel for cooking. In Urban areas; 4.1% of the population use electricity, 75.7% use LPG, 0.5% use kerosene and 18.2% use wood as cooking fuel for cooking. In Urban areas; 81.1% of the population use clean fuel for cooking which was found to be much higher in percent than Rural areas (24.9%). It was found, only 7% of the

households in Nagaland have access to modern and relatively clean source of energy for cooking and heating requirement, whereas, approximately 93% of the population depend on firewood and other source of energy for cooking and heating requirement (Central Electricity Authority, 2013).

4.6.2. Housing Amenities Information of Kohima and Peren district

i. The study from the secondary data observed that, according to Census 2011; in Kohima district, approximately 96% of the households were electrified and 4% of the households were unelectrified, whereas, in Peren district, 73% of the households were electrified, and 27% of the households were unelectrified. The study observed (Table no.2.6.2) according to NFHS-5; approximately 100% of the population in Kohima district live in household with electricity connection which was found to be higher in percent than Peren district (98%).

ii. The study from secondary data of NFHS-5 reported that, both Kohima district (99.6%) and Peren district (99.8%) i.e., approximately 100% of households have access to toilet facility. It was observed in Kohima district; 87% of the population were living in households that used improved sanitation facility which was found to be lower in percentage as against Peren district (89%). The observation of the study implied that, though the households have toilet facility, certain percentage of the households were deprived in improved sanitation.

iii. The study from the secondary data according to the Status of Functional Tap Connection of Nagaland; in Kohima district, 21871 households were provided FHTC, and 25671 households were provided FHTC under Rural Water Supply, Jal Jeevan Mission (JJM) 2019-2024, and for Peren district as per the Status of Functional Tap Connection; 16791 households were provided FHTC. In Kohima district; approximately 90% of the population were living in households with improved drinking water source and approximately 93% of the people in Peren district were living in household with improved drinking water. Because of Jal Jeevan Mission; 81% of the households in Kohima district were covered and 84% in Peren district.

iv. In Kohima district according to Census; it was observed a total of 19 families i.e., about 100 people, live on footpath or without any roof cover whereas, in

Peren district; a total of 5 families i.e., about 31 people, live on footpath or without any room cover.

v. The study from the secondary data according to the Central Electrical Authority 2013, in Kohima district; 11,400 households' own radio/transistors, 9,810 of the households owns televisions, 247 household's own computer/laptop with internet and 1,376 households owns computer/laptop without internet and 14,497 households owns mobile handset whereas, in Peren district; 2,716 households' own radio/transistors, 2,895 households' own television, 54 household's own computer/laptop with internet, 802 household's own computer/laptop without internet and 5,147 households owns mobile handset. It was observed Kohima district households have higher percent of command over assets ownership than Peren district. It is to be noted NFHS does not report on district wise ownership of assets.

vi. In Kohima district, approximately 62% of the population are living in households that used clean cooking fuel whereas, in Peren district; 31% of the people live in household that used clean cooking fuel. This clearly depicted that in Nagaland, use of clean cooking source of energy for meeting the cooking and heating requirement was very low and poor.

4.7.1. Standard of living deprivation of Nagaland

The study from the Primary survey (Table no.2.7.1) showed that in Nagaland, the least deprivation was observed in indicator water (1%); where 29% of the population lived in households with tap water connection within their dwellings, and the highest deprivation was observed in indicator sanitation and housing (15% each, respectively). The same percentage of deprivation and the same deprivation of indicator was observed for Rural areas. For the Urban areas; the least deprivation was observed in indicator water (1%); where 45% of the population lived in households with tap water connection within their dwellings, which was found to be higher in percent than the Rural (16%). The highest deprivation was observed in indicator housing and assets (16% each, respectively), unlike the state, and Rural areas. It was observed the highest contribution of indicator to deprivation; Nagaland and Rural areas showed similar indicators sanitation and housing with similar percentage but for the urban areas the

indicators were housing and assets. In Kohima district; the least contribution in deprivation was observed in indicator water (2%) and the highest contribution in deprivation was observed in indicators sanitation and housing, with similar percentage of deprivation (15% each respectively). In Peren district; the least contribution in deprivation was observed in indicator water (1%) and the highest contribution in deprivation was observed in indicators sanitation and housing, with similar percentage of deprivation (15% each respectively).

i. Pertaining to water deprivation; Nagaland, Rural and Urban areas and Peren district shared the same percentage of deprivation i.e., approximately 1%, whereas for Kohima district it was 2%. It indicated, 1% of the households in Nagaland, Rural, Urban and Peren district does not have access to safe, and clean drinking water, which was found to be lower in deprivation than Kohima district; 2% of the households does not have access to safe drinking water. It was also observed Urban households have higher percent of tap water connection within their dwellings than Rural households. The study observed that, government should come up policies according to area specific and not policies in general.

ii. In deprivation of indicator sanitation; Nagaland, Rural, Kohima district and Peren district shared similar percentage of deprivation (15% each, respectively) and Urban (14%). It indicated, 15% of the households in Nagaland, Rural, Kohima district and Peren district do not have access to improved sanitation and in Urban; 14% of the household does not have access to improved sanitation.

iii. In deprivation of indicator housing; Nagaland, Rural, Kohima district and Peren district shared similar percentage of deprivation (15% each, respectively) and in Urban; 16%. It indicated that, 15% of the households in Nagaland, Rural, Kohima district and Peren district does not have access to proper housing and in Urban; 16% of the population does not have access to proper housing.

iv. In deprivation of indicator assets; Nagaland and Peren district with similar percentage of deprivation (approximately 14% each, respectively), Rural

and Kohima district with similar percentage of deprivation (13%) and Urban (16%). It indicated, 14% of the households in both Nagaland and Peren district, 13% of household in both Rural and Kohima district and 16% of households in Urban does not have access to assets ownership.

v. In deprivation of indicator cooking fuel; both Nagaland and Peren district shared 9%, Rural (10%), Kohima district (8%) and Urban (6%). It indicated, 9% of the household both in Nagaland and Peren district, 10% of the household in Rural, 8% of the household in Kohima district and 6% of the household in Urban does not have access to clean cooking fuel.

4.7.2. Standard of living deprivation of Kohima district

The study observed from primary survey (Table no.2.7.2), in Kohima district; the least deprivation was observed in indicator water (2%); where 29% of the population live in a household with tap water connection within their dwellings, and indicator sanitation and housing showed the highest contribution to deprivation (15% each, respectively). The similar percentage of deprivation and the same deprivation of indicator was observed for Peren district. The only difference was in deprivation of indicator water, where, Kohima district showed marginally higher percent of deprivation (2%) as against Peren district (1%). The study observed that; households in Kohima district faced higher percent of deprivation than Peren district, and households in Kohima district have higher percent of tap water connection within their dwellings than Peren district.

i. The study observed from primary survey (Table no.2.7.2) that Kohima Rural does not faced deprivation in indicator water, whereas, Kohima Urban faced deprivation of 5%. It indicated, 5% of the households in Kohima Urban does not have access to safe drinking water. NHAK colony faced deprivation of 13%, whereas, Forest colony does not face deprivation. It indicated, 13% of the households in NHAK colony does not have access to safe drinking water. In Kohima Urban; 75% of the households have tap water connection within their dwellings which was

found to be higher in percent than Kohima Rural (36%), and NHAK colony (60%).

ii. In terms of deprivation in sanitation; 16% of households in Kohima Rural and 15% of the households in Kohima Urban were deprived. It indicated that, in Kohima Rural, 16% of the households does not have access to improved sanitation and 15% of the households in Kohima Urban does not have access to improved sanitation. It was observed, Kiruphema village, contributed 17% of deprivation and Mengujuma village 15%. It indicated that, 17% of the households in Kiruphema village does not have access to improved sanitation and 15% of the households in Mengujuma village does not have access to improved sanitation. In Forest colony 17% of the households were deprived in sanitation which was found to be higher in deprivation than NHAK colony of 15%. It means that, 17% of the households in Forest colony, and 15% of the households in NHAK colony does not have access to improved sanitation.

iii. In terms of deprivation in indicator housing; 16% of households in Kohima Rural and 15% of households in Kohima Urban were deprived. It indicated that, in Kohima Rural; 16% of the households and 15% of the households in Kohima Urban does not have access to proper housing. It was observed Kiruphema village contributed 17% of deprivation and Mengujuma village, 15%. It indicated that, 17% of the households in Kiruphema village does not have access to proper housing and 15% of the households in Mengujuma village does not have access to proper housing. Forest colony contributed 17% of deprivation and NHAK colony 13%. It means that, 17% of the households in Forest colony does not have access to proper housing and 13% of the households in NHAK colony does not have access to proper housing.

iv. In terms of deprivation in assets; 11% of households in Kohima Rural and 15% of the households in Kohima Urban were deprived. It indicated that, 11% of the households in Kohima Rural and 15% of the households in Kohima Urban does not have ownership over assets. It was observed; 13% of households in Kiruphema village and 10% of households in Mengujuma

village were deprived in indicator assets. It means, in Kiruphema village; 13% of the household and 10% of the households in Mengujuma village does not have ownership over assets. It was observed, 17% of the household in Forest colony and 13% of the households in NHAK colony were deprived. It indicated that, in Forest colony; 17% of the households and in NHAK colony; 13% of the households does have ownership over assets.

v. In terms of deprivation of cooking fuel; 11% of households in Kohima Rural and 5% of the households in Kohima Urban were deprived. It indicated that, in Kohima Rural; 11% of the households and in Kohima Urban; 5% of the households does not have access to clean cooking fuel. It was observed, 15% of the households in Mengujuma village and 4% of the households in Kiruphema village were deprived. It means that, in Megujuma village; 15% of the households and in Kiruphema village; 4% of the households does not have access to clean cooking fuel. In NHAK colony13% of the households were deprived, and no deprivation in Forest colony. It indicated that, in NHAK colony; 13% of the households does not have access to clean cooking fuel.

It was also observed, Kohima Rural face higher percentage of deprivation in indicator sanitation, housing and cooking fuel than Kohima Urban, and Kohima Urban face higher percentage of deprivation in indicator water and assets than Kohima Rural. Kohima Rural does not show deprivation in water.

4.7.3. Standard of living deprivation of Peren district

The study from primary survey data (Table no.2.7.3) observed, the least deprivation contributed as deprivation in water (1%), and the highest deprivation contributed was indicator housing (15%).

i. In terms of water deprivation; Peren Urban does not contribute to the deprivation whereas, Peren Rural contributed 1% of deprivation. It indicated that, 1% of the households in Peren Rural does not have access to safe drinking water. It was observed New Poilwa village face deprivation of 13%; whereas, Samzuiram village does not show any deprivation. In

Peren Urban, 17% of the population have tap water connection which was found to be much higher in percent than Rural (12%), followed by Samzuiram village (10%) and New Poilwa village (34%), respectively. It is to be noted that, within the same district, within the same areas; deprivation varies. This calls for the policy maker to check deprivation according to area specific. For instance, in Kohima district for water deprivation; Kohima Urban calls for the attention of policies like JJM, again under Kohima Urban, it is only NHAK colony that needs intervention. Strict monitoring and vigilance are needed so that, the true deserving ones are benefited from schemes that are initiated by the government.

ii. In terms of deprivation in sanitation; 15% of households in Peren Rural and 13% of the households in Peren Urban were deprived. It indicated that, in Peren Rural; 15% of the households does not have access to improved sanitation and 13% of the households in Peren Urban does not have access to improved sanitation. Samzuiram village contributed 15% of deprivation and New Poilwa village 10%. It indicated that, 15% of the households in Samzuiram village does not have access to improved sanitation and 10% of the households in New Poilwa village does not have access to improved sanitation. Midland colony contributed 15% percentage of deprivation and Stadium colony 17%. It means that 15% of the households in Midland colony does not have access to sanitation and 17% of the households in Stadium colony does not have access to improved sanitation.

iii. In terms of deprivation in indicator housing; 15% of households in Peren Rural and 16% of households in Peren Urban were deprived. It indicated that, in Peren Rural 15% of the households and 16% of the households in Peren Urban does not have access to proper housing. It was observed, Samzuiram village contributed 15% of deprivation and New Poilwa village 13%. It indicated that, 15% of the households in Samzuiram village does not have access to proper housing and 13% of the households in New Poilwa village does not have access to proper housing. In Midland colony contributed 16% of deprivation and Stadium colony 17%. It means that

16% of the households in Midland colony does not have access to proper housing and 17% of the households in Stadium colony does not have access to proper housing.

iv. In terms of deprivation in assets; 13% of households in Peren Rural and 16% of the households in Peren Urban were deprived. It indicated that, 13% of the households in Peren Rural and 16% of the households in Peren Urban does not have ownership over assets. It was observed in both Samzuiram and New Poilwa village with similar percentage of deprivation; where 13% of households were deprived. It means, in both the villages, 13% of the household does not have ownership over assets. It was observed, 16% of the household in Midland colony and 17% of the households in Stadium colony were deprived. It indicated, in Midland colony 16% of the households and 17% of the households in Stadium colony 17% does have ownership over assets.

v. In terms of deprivation of cooking fuel; 10% of households in Peren Rural and 6% of the households in Peren Urban were deprived. It indicated that, in Peren Rural; 10% of the households and in Peren Urban; 5% of the households does not have access to clean cooking fuel. It was observed, 10% of the households in Samzuiram village and 13% of the households in New Poilwa village were deprived. It means that, in Samzuiram village; 10% of the households and in New Poilwa village; 13% of the households does not have access to clean cooking fuel. It was observed, 6% of the households in Midland colony were deprived, and no deprivation in Stadium colony. It indicated that, in Midland colony; 6% of the households does not have access to clean cooking fuel.

It was also observed, Peren Rural face higher percent of deprivation in indicator water, sanitation and cooking fuel than Peren Urban. Peren Urban face higher percentage of deprivation in indicator housing and assets than Peren Rural. Peren Urban does not show deprivation in water.

4.8.1. Status of water supply, toilet type, dwelling, assets and cooking fuel of Nagaland

i. The study from primary survey data (Table no.2.8.1) observed, in Nagaland, approximately 29% of the households have tap water connection. In Rural; 16% of the households, in Urban; 45% of the households, 63% of the households in Kohima district and 14% of the households in Peren district have tap water connection.

ii. In terms of the type of toilet used; in Nagaland 50% of the household used kutcha latrine and 42% of the households used pucca latrine. In Rural; 71% of the household use kutcha latrine, 29% of the households use pucca and 3% of the households use shared pucca, whereas in Urban; 22% of the households use kutcha, 60% of the household use pucca and 7% of the households use shared pucca. In Kohima districts; 14% of the household use kutcha latrine, 86% of the households use pucca, 4% of the household use shared kutcha and 14% of the households use shared pucca latrine, whereas, in Peren district; 65% of the household use kutcha latrine, 23% use pucca and 0.31% use shared pucca.

iii. In terms of dwelling type; it was observed that, in Nagaland; 64% of the households live in kutcha house, 18% of the household live in pucca house and with similar percentage 18% of the household live in semi pucca house. In Rural; 79% of the household live in kutcha house, 16% of the household live in pucca house and 3% of the household live in semi pucca house, whereas, in Urban; 44% of the household live in kutcha house, 21% of the household live in pucca house and 36% of the household live in semi pucca house. In Kohima districts; 34% of the household live in kutcha house, 31% of the household live in pucca house and 35% of the household live in semi pucca house, whereas, in Peren district; 77% of the household live in kutcha house, 12% of the household live in pucca and 11% of the household live in semi pucca house.

iv. In terms of assets ownership; in Nagaland, 40% of the household owned car, approximately 45% of the households owns TV and approximately

95% of the households owns mobile. In Rural; 34% of the household owns car, 32% of the households owns TV and 92% of the households owns mobile, whereas, in Urban; 49% of the households owns car, 81% of the households owns TV and 98% of the households owns mobile. In Kohima district; 59% of the household owns car, 67% of the households owns TV and 97% of the households owns mobile, whereas, in Peren district; 32% of the households owns car, 35% of the households owns TV and 73% of the households owns mobile.

v. In terms of cooking fuel; in Nagaland; approximately 79% of the household use LPG as cooking fuel for cooking food. In Rural; 67% of the households use LPG as cooking fuel, which is much lower in percentage than Urban where 93% of the households use LPG as cooking fuel. In Kohima district; 91% of the household use LPG as cooking fuel which is much higher in percentage than Peren district; 73% of the household use LPG as cooking fuel.

4.8.2. Status of water supply, toilet type, dwellings, assets, and cooking fuel of Kohima district

i. The study from the primary survey data observed (Table no.2.8.2), in Kohima Rural; 36% household have tap water connection, whereas Kohima Urban; 75% households have tap water connection. In Kiruphema village; 41% of the households and 28% of the households in Mengujuma village have tap water connection, whereas, 60 % of the households in NHAK colony and 95% of the households in Forest colony have tap water connection.

ii. In terms of toilet types; in Kohima Rural, 22% of the household use kutcha latrine, 58% of households use pucca latrine and 19% of households use shared pucca latrine whereas, in Kohima Urban;11% of the household use kutcha latrine, 89% of the households use pucca latrine, 5% of the households use shared kutcha and 11% of the households use shared pucca. In Kiruphema village; 7% of the household use kutcha latrine, 93% use pucca, 34% use shared pucca latrine, whereas, in Mengujuma village; 42% of the household use kutcha latrine, and 58% of the households use pucca latrine. In NHAK colony;

12% of the household use kutcha latrine, 88% of the household use pucca latrine, 9% of the household use shared kutcha and 20% of the household use shared pucca latrine, whereas, in Forest colony, 10% of the households use kutcha latrine, and 90% of the households use pucca latrine.

iii. In terms of dwellings; in Kohima Rural; 19% of the household live in kutcha housing, and 52% of the household live in pucca housing, whereas, in Kohima Urban; 27% of the household live in kutcha housing, 24% of the household live in pucca housing and 49% of the household live in semi pucca housing. In Kiruphema village; 59% of the household live in kutcha housing, and 41% of the household live in pucca housing, whereas, in Mengujuma village; 42% of the household live in kutcha housing, and 58% of the household live in pucca housing. In NHAK colony; 37% of the household live in kutcha housing, 26% of the household live in pucca housing and 37% of the household live in semi pucca housing, whereas, in Forest colony, 13% of the household live in kutcha housing, 21% of the household live in pucca housing and 65% of the household live in semi pucca housing.

iv. In terms of assets ownership; in Kohima Rural, 62% of the household owns car, 33% of the households owns TV and 92% of households owns mobile, whereas, in Kohima Urban; 58% of the household owns car, 82% of the households owns TV and 99% of the household owns mobile. In Kiruphema village; 56% of the households owns car, 17% of the households owns TV and 86% of the households owns mobile, whereas, in Mengujuma village; 70% of the household own car, 5% of the households owns TV and 100% of the households owns mobile. In NHAK colony; 55% of the households owns car, in 96% of the households owns TV and 100% of the household owns mobile, whereas, in Forest colony; 63% of the households owns car, 64%of the households owns TV and 97% of the households owns mobile.

v. In terms of cooking fuel; in Kohima Rural; 76% of the household use LPG as cooking fuel, whereas in Kohima Urban; 98% of the household use LPG as cooking fuel. In Kiruphema village; 77% of the household and in Mengujuma village; 75% of the household use LPG as cooking fuel, whereas, under

Kohima Urban, in NHAK colony; 96% of the household and 100% of the household in Forest use LPG as cooking fuel.

4.8.3. Status of water supply, toilet type, dwellings, assets, and cooking fuel Peren district

i. The study from primary survey data observed (Table no.2.8.3), 13% of the households have tap water connection, which was found to be higher in percent than Peren Rural but lower in percent than Peren Urban. In Peren Rural; 12% of households have tap water connection, which was found to be lower in percentage than Peren Urban (17%). In Samzuiram village, 10% of households which was found to be much lower in percentage than 34% of the households in New Poilwa village have tap water connection. In Midland colony; 10 % of the household was found to be much lower in percentage than 29% of the households in Stadium colony live have tap water connection.
ii. In terms of toilet types; 65% of the households use kutcha latrine, 23% of households have pucca latrine and about 0.31% of households use shared pucca latrine. In Peren Rural; 80% of the household use kutcha latrine, 10% of the households use pucca latrine and 0.45% of the households use shared pucca latrine whereas, in Peren Urban; 33% of the household use kutcha latrine, and 31% of the households use pucca latrine. In Samzuiram village; 83% of the household use kutcha latrine, 17% of households use pucca, and 0.51% of households use shared pucca latrine, whereas, in New Poilwa village; 55% of the household use kutcha latrine, and 45% of the household use pucca latrine. In Midland colony; 51% of the household use kutcha latrine, and 49% of the household use pucca latrine, whereas, in Stadium colony, 100% i.e., all the household use pucca latrine.
iii. In terms of dwellings; 77% of the household live in Kutcha housing, 12% of the households live in pucca housing and about 11% of households live in semi-pucca housing. In Peren Rural; 85% of the household live in kutcha housing, 10% of the household live in pucca housing, and 5% of the household live in semi pucca housing, whereas, in Peren Urban; 17% of the household live in kutcha housing, and 33% of the household live in pucca housing. In Samzuiram

village; 87% of the household live in kutcha housing, 10% of the household live in pucca housing, and 3% of the household live in semi pucca housing, whereas, in New Poilwa village; 64% of the household live in kutcha housing, 12% of the household live in pucca housing and 24% of the household live in semi pucca housing. In Midland colony; 69% of the household live in kutcha housing, 11% of the household live in pucca housing and 21% of the household live in semi pucca housing, whereas, in Stadium colony; 45% of the household live in kutcha housing, 29% of the household live in pucca housing and 26% of the household live in semi pucca housing.

iv. In terms of assets ownership; 32% of the households owns car, 35% of the households owns TV, 94% of the households owns mobile. In Peren Rural; 29% of the household owns car, 32% of the households owns TV and 92% of households owns mobile, whereas, in Peren Urban; 39% of the household owns car, 40% of the households owns TV and 97% of the household owns mobile. In Samzuiram village; 30% of the households owns car, 26% of the households owns TV and 92% of households owns mobile, whereas, in New Poilwa village; 19% of the households own car, 75% of households owns TV and 93% of households own mobile. In Midland colony; 30% of the households owns car, 22% of the households owns TV and 96% of the household owns mobile, whereas, in Stadium colony, 56% of the households owns car, 72% of households owns TV and 100% owns mobile.

v. In terms of cooking fuel; 73% of the households use LPG as cooking fuel. In Peren Rural; 65% of the household use LPG as cooking fuel, whereas in Peren Urban; 90% of the household use LPG as cooking fuel. In Samzuiram village; 67% of the household and in New Poilwa village; 52% of the household use LPG as cooking fuel, whereas, in Midland; 87% of the household and 95% of the household in Stadium colony use LPG as cooking fuel.

4.9.1 MPI of Nagaland

The study from primary survey data (Table no.3.1.1) showed that, 22% of the population in Nagaland were multidimensionally poor as represented by multidimensional headcount ratio (***H***). The intensity of deprivation as shown by ***A*** was

found to be 36%. In other words, poor people on an average are unable to have access to 36% of the weighted indicators. The MPI value for Nagaland was found to be 8%. Among the various indicators, it can be seen that years of schooling (46%) contributed the highest percent of deprivation to MPI, followed by housing and sanitation with similar percentage of deprivation (15%), assets (14%), cooking fuel (9%) and water (1%), respectively. The result also showed that Health dimension was better off in the state as it has zero contribution to MPI. In other words, people were not deprived in terms of health dimension.

According to NITI Aayog et al. (2023), 15.43% of the population were multidimensionally poor, which was found to be lower than the primary survey finding (22%); intensity of poverty was reported to be 43%, which was found to be higher than the primary survey finding (36%); MPI value was reported to be 0.066, which was lower than primary survey finding (0.080). In terms of the indicator years of schooling, it was reported 5.09% of the population were deprived, which was found to be much lower than primary survey finding of 46%. It terms of the indicator school attendance, it was reported 2.60% of the population were deprived, whereas, as per the finding of primary survey, no deprivation was recorded. In terms of indicator water, 3.20% of the population were reported to be deprived, which was higher than primary survey finding where 1% of the population were deprived in drinking water; sanitation, 3.36% of the population were reported to be deprived which was found to lower than primary survey finding (15%); housing, 14.46% of the population were reported to be deprived in proper housing, which was found to lower than primary survey finding of 15%; assets, 10% of the population were reported to be deprived, which was found to be lower than primary survey finding of 14%. The primary survey found, no deprivation in Health dimensions, whereas in the secondary data 11% of total multidimensional poor population were deprived in nutrition and 0.74% were deprived in child and adolescent mortality.

4.9.2. MPI of Rural and Urban

The study from the primary survey data (Table no.3.1.1 & Table no.3.1.2) observed, the MPI value of Rural areas was found to be 11%, which was higher than the MPI

value of Urban (4%). The observation indicated that, MPI poor were more concentrated in Rural areas than Urban areas, since MPI value of Rural areas was found to be higher than Urban areas. The result was also substantiated by the multidimensional headcount (**H**); for Rural areas; 30%, and for Urban areas; 12%. It indicated that, in Rural areas; 30% of the population were multidimensional poor which was found to be much higher in percentage than Urban areas. This observation proved Hypothesis 1 that, there is a significant difference in multidimensional poverty between Rural and Urban areas.

According to NITI Aayog (2023), it was reported 20% of the population from Rural were multidimensionally poor, which was found to be much lower in percent than primary survey result (30%), and 6% of the population in Urban were multidimensionally poor; which was found to higher in percent than primary survey finding of 4%. The MPI value for Rural was 0.085 and for Urban, it was 0.026, which was found to be lower than the MPI value of primary survey findings.

In terms of intensity of deprivation, ***A***, Rural experienced 36% of deprivation which was marginally higher in percentage as compared to the Urban areas who experienced 35% of deprivation. It indicated, the poor people in Rural areas were unable to have access to about 36% of the weighted indicators whereas, Urban poor persons are unable to have access to about 35% of the weighted indicators. It was observed, for Rural; A was 43% and for Urban; A was 42%, both higher in percent than primary survey finding. The highest contributing indicator to MPI in Rural areas were indicators years of schooling (45%), followed by sanitation and housing with similar percentage of deprivation (15% each respectively), assets (13%), cooking fuel (10%) and water (1%), respectively.

For the Urban, the highest contributing indicators were years of schooling (47%), followed by housing and assets with similar percentage of deprivation (16%), sanitation (14%), cooking fuel (6%) and water (1%), respectively. In terms of indicators years of schooling; Urban deprivation was found to be higher in percent than Rural. In terms of water deprivation, both the areas have similar percent of deprivation approximately 1%. In terms of sanitation deprivation; Rural deprivation was found to be higher in percent than Urban. In term of housing and assets deprivation; Urban have

higher percent of deprivation than Rural. In term of cooking fuel deprivation; Rural have higher percent of deprivation than Urban.

4.9.3. MPI of Kohima district

The study from primary survey observed (Table no.3.1.3), approximately 8% of the population in Kohima district were multidimensionally poor as represented by multidimensional headcount ratio ***(H***). The intensity of deprivation as shown by ***A*** for Kohima district as 36%. In other words, poor people in Kohima district on an average are unable to have access to 36% of the weighted indicators. The MPI value of Kohima district was observed to be 3%. Among the various indicators, it can be seen that in Kohima district; years of schooling contributed highest percent of deprivation (46%) to MPI, followed by sanitation and housing, with similar percent of deprivation (15%), assets (13%), cooking fuel (8%) and water (2%), respectively. The result also showed that Health dimension to be better off in the district, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Kohima district.

In Kohima Rural; approximately 16% of the population were multidimensionally poor (**H**). The intensity of poverty ***A*** as 36%, which indicated multidimensional poor in Kohima Rural were on an average deprived in 36% of its weighted indicators. The MPI value was observed to be 6%, which was higher than the district itself (3%) and Kohima Urban (4%). The MPI value indicated that in Kohima district, multidimensional poverty was concentrated more in Kohima Rural, followed by the district itself and Kohima Urban. Among the various indicator, it can be seen; years of schooling contributed the highest percent of deprivation (47%) to MPI, followed by sanitation and housing with similar percentage of deprivation (16%), and indicator assets and cooking fuel, with similar percentage of deprivation (11%), respectively. In Kohima Rural, no deprivation in indicator water. The result also showed that Health dimension to be better off in Kohima Rural, as it has zero contribution to MPI. In other words, people were not deprived in terms of health dimension in Kohima Rural.

It was observed, the MPI value for Kiruphema village as 4%, and for Mengujuma village as 7%. It indicated multidimensional poverty as more concentrated in

Mengujuma village, as compared to Kiruphema village, since MPI value of Mengujuma village was higher than MPI value of Kiruphema village; which was substantiated by **H**. It is observed, 12% of the population in Kiruphema village, and 20% of the population in Mengujuma village were multidimensionally poor (***H***). It indicated, Mengujuma village have higher percentage of multidimensional poor than Kiruphema village. The intensity of deprivation ***A*** was approximately 34% in Kiruphema village, 37% in Mengujuma village. In other words, poor people in Kiruphema village were on an average unable to have access to 34% of the weighted indicators, and the poor people in Mengujuma village on an average were unable to have access to 37% of the weighted indicators. It also indicated the poor in Mengujuma village have higher percentage of deprivation than Kiruphema village. Among the various indicators, it can be seen that, in Kiruphema village; years of schooling contributed the highest percent of deprivation (50%) to MPI, followed by sanitation, and housing with similar percentage of deprivations (17%), indicator assets (13%), and indicator cooking fuel (4%), respectively. For Mengujuma village; indicator years of schooling contributed the highest percentage of deprivation (45%) to MPI, followed by sanitation, housing, and cooking fuel with similar percentage of deprivations (15%), and indicator assets (10%), respectively. No deprivation in indicator water.

In Kohima Urban, approximately 4% of the population were multidimensionally poor (**H**). The intensity of poverty ***A*** as 37%, which indicated multidimensional poor in Kohima Urban were on an average deprived in 37% of its weighted indicators. The MPI value was observed to be 4%. Among the various indicator, it can be seen; years of schooling contributed the highest percent of deprivation (45%) to MPI, followed by sanitation, housing, assets and cooking fuel with similar percentage of deprivation (15%), and indicator water (5%), respectively. The result also showed that Health dimension to be better off in Kohima Urban, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Kohima Urban.

It was observed the MPI value of NHAK colony as 1% and MPI value of Forest colony as 2%. It indicated that, multidimensional poverty was concentrated more in Forest colony as compared to NHAK colony since Forest colony MPI value was found to be higher than NHAK colony, which was substantiated by the value of **H.** It was observed,

only 2% of the population in NHAK colony, and 6% of the population in Forest colony were multidimensionally poor (***H***). It represented; Forest colony have higher percentage of multidimensional poor than NHAK colony and Kohima Urban. The intensity of deprivation ***A*** was approximately 45% in NHAK colony, approximately and 34% in Forest colony. In other words, poor people in NHAK colony on an average were unable to have access to 45% of the weighted indicators, and the poor people in Forest colony on an average were unable to have access to 34% of the weighted indicators. It also indicated, the poor in NHAK colony have higher percentage of deprivation than Forest colony and Kohima Urban. Among the various indicators, it can be observed, in NHAK colony; indicator years of schooling contributed the highest percent of deprivation (37%) to MPI, followed by water, sanitation, housing, assets and cooking fuel with similar percentage of deprivations (13% each, respectively). For Forest colony; indicator years of schooling contributed the highest (50%) to MPI, followed by sanitation, housing, and assets with similar percentage of deprivations (15% each respectively). No deprivation in indicator water. The result also showed, dimension Health to be better off in both the colonies, as it has zero contribution to MPI. In other words, people were not deprived in terms of health in both the colonies.

The study observed that, the MPI value of Kohima Rural as 6% and the MPI value of Kohima Urban as 2%. This indicated that even within the same district multidimensional poor were more concentrated in Kohima Rural as compared to Kohima Urban, since MPI value of Kohima Rural was higher than Kohima Urban. The result was substantiated by the multidimensional headcount (**H**), where for Kohima Rural, it was found to be 16% and for Kohima Urban, it was found to be 4%. It indicated that, 16% of the population in Kohima Rural were multidimensional poor, which was much higher in percentage than Kohima Urban of 4%. This observation proved Hypothesis 1 that, there is a significant difference in multidimensional poverty between Rural and Urban of Kohima district.

4.9.4. MPI of Peren district

The study from primary survey observed (Table no.3.1.4), approximately 29% of the population in Peren district were multidimensionally poor as represented by

multidimensional headcount ratio ***(H***). The intensity of deprivation as shown by ***A*** for Peren district as 36%. In other words, poor people in Peren district on an average are unable to have access to 36% of the weighted indicators. Among the various indicators, it can be seen; indicator years of schooling contributed highest percent of deprivation (46%) to MPI, followed by indicator sanitation and housing, with similar percentage of deprivations (15%), followed by indicator assets (14%), cooking fuel (9%) and water approximately (1%), respectively. The result also showed that Health dimension to be better off in the district, as it has zero contribution to MPI. In other words, people are not deprived in terms of health dimension in Peren district.

In Peren Rural, the MPI value was observed to be 12% and approximately 33% of the population in Peren Rural were multidimensionally poor (**H**). The intensity of poverty ***A*** as 36%, which indicated multidimensional poor in Peren Rural were on an average deprived in 36% of its weighted indicators. Among the various indicator, for Peren Rural; indicator years of schooling contributed the highest percent of deprivation (45%) to the MPI, followed by indicator sanitation and housing; with similar percentage of deprivation (15%), indicator assets (13%), indicator cooking fuel (10%), and indicator water (1%), respectively. The result also showed that dimension Health to be better off in Peren Rural, as it has zero contribution to MPI. In other words, people were not deprived in terms of dimension health in Peren Rural.

It was observed, the MPI value of Samzuiram village to be 12%, which was higher than the MPI value of New Poilwa village (10%). It indicated that, multidimensional poverty was concentrated more in Samzuiram village as compared to New Poilwa village, which was substantiated by the value of **H**. It was observed, approximately 34% of the population in Samzuiram village and 23% of the population in New Poilwa village were multidimensionally poor (***H***). The intensity of deprivation ***A*** was 36% in Samzuiram village and approximately 44% in New Poilwa village. In other words, poor people in Samzuiram village on an average are unable to have access to 36% of the weighted indicators and the poor people in New Poilwa village on an average are unable to have access to 44% of the weighted indicators. Among the various indicators, it can be seen that in Samzuiram village; indicator years of schooling contributed the highest percentage of deprivation (46%) to MPI, followed by indicators sanitation, and

housing, with similar percentage of deprivations (15%), followed by indicator assets (13%) and cooking fuel 10%, respectively. No deprivation in indicator water. For New Poilwa village; indicator years of schooling contributed the highest percent of deprivation (38%) to MPI, followed by indicator water, housing, assets and cooking fuel with similar percent of deprivation (13%), followed by indicator sanitation (10%), respectively.

In Peren Urban, the MPI value was observed to be 7%, approximately 20% of the population in Peren Urban were multidimensionally poor (***H)***. The intensity of poverty ***A*** as 35%, which indicated multidimensional poor in Peren Urban were on an average deprived in 35% of its weighted indicators. Among the various indicator; indicator years of schooling contributed the highest percent of deprivation (48%) to MPI, followed by indicator housing and assets, with similar percent of deprivation (16%), followed by indicator sanitation (13%) and indicator cooking fuel (6%), respectively. The result also showed dimension Health to be better off in as in Peren Urban, as it has zero contribution to MPI. In other words, people are not deprived in terms of dimension health in Peren Urban.

It was observed, the MPI value of Midland colony was found to be 10%, which was higher than the MPI value of Stadium colony (2%). It indicated that, multidimensional poverty was found to be concentrated more in Midland colony as compared to Stadium colony, which can be substantiated by the value of **H.** It can be observed, approximately 29% of the population in Midland colony, and approximately 5% of the population in Stadium colony, were multidimensionally poor (***H***). It also represented; Midland colony have higher percentage of multidimensional poor than Stadium colony and Peren Urban. The intensity of deprivation ***A*** was approximately 35% in Midland colony, and 34% in Stadium colony. In other words, poor people in Midland colony on an average were unable to have access to 35% of the weighted indicators and the poor people in Stadium colony on an average were unable to have access to 34% of the weighted indicators. Among the various indicators, it can be seen, in Midland colony; indicator years of schooling contributed highest percentage of deprivation (48%) to MPI, followed by housing and assets, with similar percentage of deprivations (16% each), followed by sanitation (15%) and cooking fuel (6%), respectively. For Stadium

colony; indicators years of schooling contributed the higher percentage of deprivation (45%) to MPI, followed by, sanitation, housing, assets and cooking fuel with similar percentage of deprivations (17% each) respectively.

The study observed that, the MPI value of Peren Rural as 11% and the MPI value of Peren Urban as 7%. This indicated that even within the same district multidimensional poor were more concentrated in Peren Rural as compared to Peren Urban, since MPI value of Peren Rural was higher than Peren Urban. The result was substantiated by the multidimensional headcount (**H**), where for Peren Rural; it was found to be 33% and for Peren Urban; it was found to be 20%. It indicated that, 33% of the population in Peren Rural were multidimensional poor, which was much higher in percent than Peren Urban of 20%. This observation proved Hypothesis 1 that, there is a significant difference in multidimensional poverty between Rural and Urban of Peren district.

The study from the primary survey data (Table no.3.1.3 & Table no.3.1.4) observed that, the MPI value of Kohima district as 3% and the MPI value of Peren district as 10%. This indicated that multidimensional poor were more concentrated in Peren district as compared to Kohima district, since MPI value of Peren district was higher than Kohima district. The result was substantiated by the multidimensional headcount (**H**), where for Kohima district it was found to be 8% and for Peren district, it was found to be 29%. It indicated that, 29% of the population in Peren district were multidimensional poor, which was found to be much higher in percent than Kohima district. This observation proved Hypothesis 1 that, there is a significant difference in multidimensional poverty between the two districts- Kohima and Peren.

The study from the primary survey data observed that, the MPI value of Kohima Rural as 6% and the MPI value of Peren Rural as 11%. This indicated that multidimensional poor were more concentrated in Peren Rural as compared to Kohima Rural, since MPI value of Peren Rural was higher than Kohima Rural. The result was substantiated by the multidimensional headcount (**H**), where for Peren Rural; it was found to be 33% and for Kohima Rural, it was found to be 16%. It indicated that, 33% of the population in Peren Rural were multidimensional poor, which was much higher in percentage than Kohima Rural of 16%. It was observed that, the MPI value of Kohima Urban as 2%

and the MPI value of Peren Urban as 7%. This indicated that, multidimensional poor were more concentrated in Peren Urban as compared to Kohima Urban, since MPI value of Peren Urban was higher than Kohima Urban. The result was substantiated by the multidimensional headcount (**H**), where for Peren Urban; it was found to be 20% and for Kohima Urban, it was found to be 4%. It indicated that, 20% of the population in Peren Urban were multidimensional poor, which was much higher in percentage than Kohima Urban of 4%. It was also observed that, multidimensional were more concentrated in Kohima Rural (16%) than Kohima Urban (4%), Peren Rural (33%) than Peren Urban (20%). This observation proved Hypothesis 1 that, there is a significant difference in multidimensional poverty between Rural and Urban.

4.10.1. Income groups and MPI poor of Nagaland

The relationship between income groups and MPI poor in Nagaland were examined from the primary survey (Table no.3.2.1). The results showed, in Nagaland; 47% of the multidimensional poor were from BPL income group, 30% were from lower income group and 3% were from middle income group. This indicated that, as income increases from BPL to rich; there is a fall in MPI poor (i.e., from 47% to 3%) or as income decreases; MPI poor increases (i.e., from 3% to 47%). It was observed; upper middle-income and rich income group does not contribute to multidimensional poverty. The result of the correlation value between MPI poor and average income in Nagaland was -0.687. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.2. Income groups and MPI poor in Rural

The relationship between income groups and MPI poor in Rural were examined from the primary survey (Table no.3.2.2). The results showed, 47% of the multidimensional poor were from BPL income group, 33% were from lower income group and 4% were from middle-income group. This indicated that, as income increases from BPL to upper middle; MPI poor falls (i.e., from 47% to 4%) or as income decreases; MPI poor increases (i.e., from 4% to 47%). It was observed; upper middle-income group does

not contribute to multidimensional poverty. The result of the correlation value between MPI poor and average income in Rural areas was -0.532. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.3. Income groups and MPI poor in Urban

The study from the primary survey (Table 3.2.3) examined the relationship between income groups and MPI poor in Urban. The results showed, 22% of the multidimensional poor were from lower income group and 3% were from middle income group. It was observed; upper middle-income and rich income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to rich; MPI poor decreases (i.e., from 22% to 3%) or as income decreases; MPI poor increases (i.e., from 3% to 22%). The result of the correlation value between MPI poor and average income in Urban areas was found to be -0.325. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.4. Income groups and MPI poor of Kohima district

The study from the primary survey (Table no.3.2.4) examined the relationship between income groups and MPI poor in Kohima district. The results showed; 15% of the multidimensional poor were from lower income group. It was observed; middle-income, upper middle-income and rich income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to rich; MPI poor decreases (i.e., from 15% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 15%). The result of the correlation value between MPI poor and average income in Kohima district was found to be -0.359. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises.

This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.5. Income groups and MPI poor of Kohima Rural

The study from the primary survey (Table no.3.2.5) examined the relationship between income groups and MPI poor in Kohima Rural. The results showed; 18% of the multidimensional poor were from lower income group. It was observed; middle-income, and upper middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper middle-income; MPI poor decreases (i.e., from 18% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 18%). The result of the correlation value between MPI poor and average income in Kohima Rural was found to be -0.216. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.6. Income groups and MPI poor in Kiruphema village

The study from the primary survey (Table no.3.2.6) examined the relationship between income groups and MPI poor in Kiruphema village. The results showed; 16% of the multidimensional poor were from lower income group. It was observed; middle-income and upper middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper-middle; MPI poor decreases (i.e., from 16% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 16%). The result of the correlation value between MPI poor and average income in Kiruphema village was found to be -0.230. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.7. Income groups and MPI poor in Mengujuma village

The study from the primary survey (Table no.3.2.7) examined the relationship between income groups and MPI poor in Mengujuma village. The results showed; 21% of the multidimensional poor were from lower income group. It was observed; middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to middle; MPI poor decreases (i.e., from 21% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 21%). The result of the correlation value between MPI poor and average income in Mengujuma village was found to be -0.088. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.8. Income groups and MPI poor of Kohima Urban

The study from the primary survey (Table no.3.2.8) examined the relationship between income groups and MPI poor in Kohima Urban. The results showed, 11% of the multidimensional poor were from lower income group. It was observed; middle-income, upper middle-income and rich does not contribute to multidimensional poverty. This indicated that, as income increases from lower to rich; MPI poor decreases (i.e., from 11% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 11%). The result of the correlation value between MPI poor and average income in Kohima Urban was found to be -0.335. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.9. Income groups and MPI poor in NHAK colony

The study from the primary survey (Table no.3.2.9) examined the relationship between income groups and MPI poor in NHAK colony. The results showed; 6% of the multidimensional poor were from lower income group. It was observed; middle-income, upper middle-income and rich does not contribute to multidimensional

poverty. This indicated that, as income increases from lower to rich; MPI poor decreases (i.e., from 6% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 6%). The result of the correlation value between MPI poor and average income in NHAK colony was found to be -0.365. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.10. Income groups and MPI poor in Forest colony

The study from the primary survey (Table no.3.2.10) examined the relationship between income groups and MPI poor in Forest colony. The results showed; 19% of the multidimensional poor were from lower income group. It was observed; middle, upper middle-income and rich does not contribute to multidimensional poverty. This indicated that, as income increases from lower to rich; MPI poor decreases (i.e., from 19% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 19%). The result of the correlation value between MPI poor and average income in Forest colony was found to be -0.317. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.11. Income groups and MPI poor of Peren district

The study from the primary survey (Table no.3.2.11) examined the relationship between income groups and MPI poor in Peren district. The results showed, 47% of the multidimensional poor were from BPL income group, 34% of the multidimensional were from lower income group and 5% were from middle income group. It was observed; upper middle-income and rich income group does not contribute to multidimensional poverty. This indicated that, as income increases from BPL to upper-middle; MPI poor decreases (i.e., from 47% to 5%) or as income decreases; MPI poor increases (i.e., from 5% to 47%). The result of the correlation value between MPI poor and average income in Peren district was found to be -0.502. The result showed that,

there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.12. Income groups and MPI poor of Peren Rural

The study from the primary (Table no.3.2.12) survey examined the relationship between income groups and MPI poor in Peren Rural. The results showed; 49% of the multidimensional poor were from BPL income group, 36% of the multidimensional were from lower income group and 5% were from middle income group. It was observed; upper middle-income does not contribute to multidimensional poverty. This indicated that, as income increases from BPL to upper-middle; MPI poor decreases (i.e., from 49% to 5%) or as income decreases; MPI poor increases (i.e., from 5% to 49%). The result of the correlation value between MPI poor and average income in Peren Rural was found to be -0.504. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.13. Income groups and MPI poor in Samzuiram village

The study from the primary survey (Table no.3.2.13) examined the relationship between income groups and MPI poor in Samzuiram village. The results showed; 47% of the multidimensional poor were from BPL income group, 37% of the multidimensional were from lower income group and 9% were from middle income group. It was observed; upper middle-income does not contribute to multidimensional poverty. This indicated that, as income increases from BPL to upper-middle; MPI poor decreases (i.e., from 47% to 9%) or as income decreases; MPI poor increases (i.e., from 5% to 49%). The result of the correlation value between MPI poor and average income in Samzuiram village was found to be -0.509. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This

observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.14. Income groups and MPI poor in New Poilwa village

The study from the primary survey (Table 3.2.14) examined the relationship between income groups and MPI poor in New Poilwa. The results showed; 34% of the multidimensional poor were from lower income group. It was observed; middle-income does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper-middle; MPI poor decreases (i.e., from 34% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 34%). The result of the correlation value between MPI poor and average income in New Poilwa village was found to be -0.188. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.15. Income groups and MPI poor of Peren Urban

The study from the primary survey (Table 3.2.14) examined the relationship between income groups and MPI poor in Peren Urban. The results showed; 27% of the multidimensional poor were from lower income group and 6% of the multidimensional poor were from middle-income group. It was observed; upper middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper-middle; MPI poor decreases (i.e., from 27% to 6%) or as income decreases; MPI poor increases (i.e., from 6% to 27%). The result of the correlation value between MPI poor and average income in Peren Urban was found to be -0.146. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.16. Income groups and MPI poor in Midland colony

The study from the primary survey (Table no.3.2.16) examined the relationship between income groups and MPI poor in Midland colony. The results showed; 34% of the multidimensional poor were from lower income group and 15% of the multidimensional poor were from middle-income group. It was observed; upper middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper-middle; MPI poor decreases (i.e., from 34% to 15%) or as income decreases; MPI poor increases (i.e., from 15% to 34%). The result of the correlation value between MPI poor and average income in Midland colony was found to be -0.136. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.10.17. Income groups and MPI poor in Stadium colony

The study from the primary survey (Table no.3.2.17) examined the relationship between income groups and MPI poor in Stadium colony. The results showed; 10% of the multidimensional poor were from lower income group. It was observed; middle-income and upper middle-income group does not contribute to multidimensional poverty. This indicated that, as income increases from lower to upper-middle; MPI poor decreases (i.e., from 10% to 0%) or as income decreases; MPI poor increases (i.e., from 0% to 10%). The result of the correlation value between MPI poor and average income in Stadium colony was found to be -0.167. The result showed that, there exists a negative and inverse relation between MPI poor and average income i.e., with the rise in income; MPI poor falls and with the fall in income; MPI poor rises. This observation proved Hypothesis 2 that; lower income groups are vulnerable to multidimensional poverty.

4.11.1. Contribution of various income groups to the MPI in Nagaland

The study from primary survey (Table no.3.3.1) observed that, among the income group in Nagaland; the percentage of lower- income group was significantly higher in percentage than BPL, middle-income, and upper middle-income and rich-income

households i.e., approximately 72% of the population in Nagaland belongs to lower-income group which was significantly much higher in percentage than, BPL (1%), middle-income (17%), upper middle-income (9%) and rich-income group (2%), respectively. In Nagaland; income group belongs from BPL to rich-income, where, BPL to middle-income contributed to multidimensional poverty. From the BPL; 47% of the population are multidimensional poor, from the lower-income; about 30% of the population are multidimensional poor and from the middle-income; approximately 3% are multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 3%, or increases with fall in income (i.e., from 3% to 47%). It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Rural areas; the percentage of lower-income household was significantly higher in percentage than BPL, middle-income and upper middle-income groups i.e., approximately 87% of the population in Rural areas belongs to lower-income household which was observed to be significantly much higher in percentage than BPL (1%), middle-income (8%) and upper middle-income (4%), respectively. In Rural areas; households comprised from BPL to upper middle-income, where, BPL to middle-income contributed to multidimensional poverty. From the BPL households; about 47% of the population were multidimensional poor, from the lower-income group; 33% of the population were confined to multidimensional poverty and from middle-income; approximately 4% of the population were multidimensional poor. It was observed, the contribution to MPI decreases with increase in income i.e., from 47% to 4%, and vice versa. It indicated, household with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that lower income group are more vulnerable to multidimensional poverty.

In Urban areas; the percentage of lower-income group/household was significantly higher in percentage than middle-income, upper middle-income and rich-income group i.e., approximately 52% of the population in Urban areas belongs to lower-income which was found to be significantly higher in percentage than middle-income (29%), upper middle-income (15%) and rich-income (4%), respectively. In Urban

areas; households belong from lower-income to rich-income, where, lower-income and middle-income were contributing to multidimensional poverty. BPL households were not observed in Urban. From lower-income households; about 22% of the population were multidimensional poor and from the middle-income 3% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 22% to 3%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are more vulnerable to multidimensional poverty.

4.11.2. Contribution of various income categories to the MPI of Kohima district

The study from primary survey (Table no.3.3.2) observed that, among the income categories; the percentage of lower-income was significantly much higher in percentage than, middle-income, upper middle-income and rich-income group i.e., approximately 51% of the population in Kohima district belongs to lower-income which was found to be significantly much higher in percentage than, middle-income (25%), upper middle-income (18%) and rich-income group (6%), respectively. No BPL households were observed in Kohima district. In Kohima district; households comprised from lower-income to rich-income, where it was observed only lower-income households contributed to multidimensional poverty. From lower-income group, approximately 15% of the population were confined to multidimensional poverty. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Kohima Rural; the percentage of lower-income was significantly higher in percentage than middle-income and upper middle-income i.e., approximately 85% of the population in Kohima Rural belongs to lower-income which was found to be significantly much higher in percentage than, middle-income whose percentage contribution was approximately 10%, and upper middle-income as 4%, respectively. In Kohima Rural; household belong from lower-income to upper middle-income, where it was observed that only lower-income were contributing to multidimensional

poverty. BPL and rich- income groups were not observed in Kohima Rural. From the lower-income; about 18% of the population were multidimensional poor. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Kiruphema village; the percentage of lower-income was significantly higher in percentage than middle-income and upper middle-income group, i.e., approximately 77% of the population belongs to lower-income household which was found to be significantly much higher in percentage than, 15% households of Middle-income and 8% households of upper middle-income group. No BPL and rich income group were observed in Kiruphema village. Households comprised from lower-income to upper middle-income, where, it was observed that, only lower-income households were contributing to multidimensional poverty. From lower-income group, about 16% of the population were multidimensional poor. It also indicated that, lower income households contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Mengujuma village, the percentage of lower-income household was significantly higher in percentage than middle-income households, i.e., approximately 95% of the population belongs to lower-income household which was found to be significantly much higher in percentage than, 5% of middle-income households. No BPL, upper middle-income and rich income groups were observed in Mengujuma village. Households comprised from lower-income and middle-income households, where it was observed that, only lower-income households were contributing to multidimensional poverty. From lower-income households, 21% of the population were multidimensional poor. It also indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Kohima Urban; the percentage of lower-income was significantly higher in percentage than middle-income, upper middle-income and rich-income groups i.e., approximately 37% of the population belongs to lower-income, 32% of the population

belongs to middle-income, 23% of the population belong to upper middle-income and 9% of the population belong to rich-income groups, respectively. Households comprised from lower-income to rich-income, where, it was observed that only lower-income were contributing to multidimensional poverty. BPL households were not observed in Kohima Urban. From the lower-income group, about 11% of the population were multidimensional poor. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In NHAK colony; the percentage of lower-income was significantly higher in percentage than, middle-income, upper middle-income and rich-income group i.e., approximately 40% of the population belong to lower-income which was found to be significantly much higher in percentage than, 30% of the population who belong to middle-income, 20% of the population belong to upper middle-income and 10% of the population belong to rich-income groups, respectively. No BPL households were observed in NHAK colony. Households belonged from lower-income to rich-income groups, where it was observed that, only lower-income groups were contributing to multidimensional poverty. From the lower-income, about 6% of the households were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Forest colony; the percentage of lower-income and middle-income was found to be similar in percentage and was significantly higher in percentage than upper middle-income and rich income i.e., approximately 33% of the population belongs to lower-income and middle-income which was found to be significantly higher in percentage than, 27% of the population belonging to upper Middle-income and 7% of the population belonging to rich-income groups, respectively. No BPL households were observed in Forest colony. Households comprised from lower-income to rich-income group, where, it was observed that, only lower-income households were contributing to multidimensional poverty. From lower-income group, about 19% of the households were multidimensional poor. It indicated that, households with lower income

contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

4.11.3. Contribution of various income categories to the MPI of Peren district

The study from the primary survey observed (Table no.3.3.3) that, among the income categories; the percentage of lower-income group was significantly much higher in percentage than, BPL, middle-income, and upper middle-income group i.e., approximately 81% of the population belonged to lower-income which was found to be significantly much higher in percentage than, BPL (approximately 1%), middle-income (13%), and upper middle-income group (5%), respectively. Absence of rich-income group was observed in Peren district. Households belonged from BPL-income to upper middle-income, where it was observed that, BPL, lower-income and middle-income groups contributed to multidimensional poverty. From BPL households; 47% of the population were multidimensional poor, from lower-income; approximately 34% of the population were confined to multidimensional poverty and from the middle-income; 5% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 5% and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2, that lower income group are vulnerable to multidimensional poverty.

In Peren Rural; the percentage of lower-income was significantly higher in percentage than BPL, middle-income and upper middle-income i.e., approximately 87% of the population belonged to lower-income group which was found to be significantly much higher in percentage than, BPL (1%), middle-income (8%) and upper middle-income group (4%), respectively. Households constituted from lower-income to upper middle-income, where it was observed that, BPL, lower-income and middle-income group were contributing to multidimensional poverty. Absence of rich-income group was observed in Peren Rural. From BPL; 47% of the population were multidimensional poor, from lower-income; about 36% of the population were multidimensional poor and from middle-income; about 5% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from

47% to 5%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Samzuiram village; the percentage of lower-income was significantly higher in percentage than, BPL, middle-income, and upper middle-income group i.e., approximately 89% of the population belonged to lower-income group which was found to be significantly much higher in percentage than, BPL (1%), middle-income (5%), and upper middle-income group (4%), respectively. Households belonged from BPL to upper middle-income, where it was observed that, BPL, lower-income and middle-income groups were contributing to multidimensional poverty. From BPL; 47% of the population were multidimensional poor, from the lower-income, about 36% of the population were multidimensional poor, and from the middle-income 9% of the population were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 47% to 9%, and vice versa. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In New Poilwa village; the percentage of lower-income was significantly higher in percentage than, middle-income i.e., approximately 68% of the population belonged to lower-income group which was found to be significantly much higher in percentage than, 32% of the population belonging to middle-income group. Absence of BPL, upper middle-income and rich-income group was observed in village New Poilwa. Households constituted from lower-income to middle-income group, where it was observed that, only lower-income were contributing to multidimensional poverty. From the lower-income group; about 34% of the households were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Peren Urban; the percentage of lower-income group was significantly higher in percentage than middle-income group and upper middle-income group i.e.,

approximately 68% of the population in Peren Urban belongs to lower-income which was found to be significantly much higher in percentage than, 26% of the population who belongs to middle-income group, and 6% of the population belonging to upper middle-income, respectively. Households constituted from lower-income to upper middle-income, where, it was observed that, only lower-income group were contributing to multidimensional poverty. No BPL and rich-income was observed in Peren Urban. From the lower-income, about 27% of the population were multidimensional poor. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved the Hypothesis 2 that, lower income group are more vulnerable to multidimensional poverty.

In Midland colony; the percentage of lower-income was significantly much higher in percentage than, middle-income and upper middle-income i.e., approximately 79% of the population belonged to lower-income group which was significantly much higher in percentage than, 16% of the population belonging to middle-income group and 6% of the population belonging to upper middle-income group, respectively. No BPL and rich income group were observed in Midland colony. Households constituted from lower-income group to upper middle-income group, where it was observed that, lower-income group and middle-income group in Midland colony contributed to multidimensional poverty. From the lower-income group, approximately 34% of the households were multidimensional poor and from the middle-income group about 15% of the households were multidimensional poor. It was observed that, the contribution to MPI decreases with increase in income i.e., from 34% to 15%, and vice versa. It indicated that, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

In Stadium colony; the percentage of lower-income group was significantly higher in percentage than, middle-income and upper middle-income group i.e., approximately 49% of the population belonged to lower-income group which was found to be significantly much higher in percentage than, 44% of the population belonging to middle-income group and 7% of the population belonging to upper middle-income group, respectively. Absence of BPL and rich-income group were observed in Stadium

colony. Households constituted from lower-income group to upper middle-income group, where, it was observed that, only lower-income group were contributing to multidimensional poverty. From lower-income households; about 10% of the population were multidimensional poor. It indicated, households with lower income contributed to multidimensional poverty. This observation proved Hypothesis 2 that, lower income group are vulnerable to multidimensional poverty.

4.12.1. Deprivation of the indicators among the income group in Nagaland

The study observed from primary survey (Table no.3.3.1), in Nagaland; from BPL income group, the highest percentage of deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation of 47%. From the lower-income group; it was from indicator years of schooling and housing with similar percentage of deprivation (30%), followed by indicator sanitation (29%), assets (26%), cooking fuel (20%) and water (1%). From the middle-income group; it was indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (3%), followed by cooking fuel (1%).

The study (Table no.3.3.1) observed, in rural areas; from BPL income group, the highest percentage of deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%), and no deprivation in indicator water. From the lower-income group; it was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (33%), followed by indicator assets (28%), cooking fuel (25%) and water (3%). From the middle-income group; it was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (1%), and no deprivation in indicator water.

The study (Table no.3.3.1) observed in Urban areas; from the lower-income group, the highest percentage of deprivation was from indicator years of schooling, sanitation, housing and assets with similar percentage of deprivation (22%), followed by indicator cooking fuel (10%) and water (1%), and from the middle-income group; it was observed in indicators years of schooling, sanitation, housing and assets, all the

indicators with similar percentage of deprivation (3%), and no deprivation in indicator water and cooking fuel.

4.12.2. Deprivation of the indicators among the income group of Kohima district

The study from the primary survey data (Table no.3.3.2) observed in Kohima district; from the lower-income group, the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (16%), followed by indicator assets (11%), cooking fuel (7%) and water (2%). In Kohima Rural; from the lower-income group, the deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (16%), followed by indicator assets (11%), cooking fuel (10%), no deprivation in indicator water. In Kiruphema village; from the lower-income group; the deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (15%), followed by indicator assets (12%), cooking fuel (4%) and water (3%), and no deprivation in indicator water. In Mengujuma village, from the lower-income group; the deprivation was from indicator years of schooling, sanitation and housing and cooking fuel with similar percentage of deprivation (17%), followed by indicator assets (10%), and no deprivation in indicator water.

It was observed (Table no.3.3.2) under Kohima Urban; from the lower-income group; the highest percentage of deprivation was from indicator years of schooling (12%), followed by indicator sanitation, housing, and assets, with similar percentage of deprivation (11%) and indicator water and cooking fuel with similar percentage of deprivation (4%). In NHAK colony, from the lower-income group; the deprivation was from indicator years of schooling, water, sanitation, housing, assets and cooking fuel with similar percentage of deprivation (6%), and in Forest colony; from the lower-income group; the deprivation was from indicator years of schooling, sanitation, housing and assets with similar percentage of deprivation (20%), and no deprivation in indicator water and cooking fuel.

4.12.3. Deprivation of the indicators among the income group of Peren district

The study from primary survey data (Table no.3.3.3) observed in Peren district; from BPL income group; the highest percentage of deprivation was from indicator years of

schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%), and no deprivation in indicator water. From the lower-income group; the deprivation was from indicator years of schooling, and housing with similar percentage of deprivation (34%), followed by indicator sanitation (33%), indicator assets (31), cooking fuel (23%) and water (2%). From the middle-income group; the deprivation was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (5%), followed by indicator cooking fuel (2%), and no deprivation in indicator water.

The study (Table 3.3.3) observed in Peren Rural; from BPL income group; the deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%), and no deprivation in indicator water. From the lower-income group; deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (36%), followed by indicator assets (32%), cooking fuel (27%) and water (3%). From the middle-income group; the deprivation was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (5%), and no deprivation in indicator water.

The study (Table no.3.3.3) observed, in Samzuiram village; from BPL income group; deprivation was from indicator years of schooling, sanitation, housing, assets and cooking fuel, all the indicator with similar percentage of deprivation (47%), and no deprivation in indicator water. From the lower-income group; the highest percentage of deprivation was from indicator years of schooling, sanitation and housing with similar percentage of deprivation (36%), followed by indicator assets (31%), cooking fuel (27%), and no deprivation in indicator water. From the middle-income group; it was observed in indicators years of schooling, sanitation, housing and assets and cooking fuel, all the indicators with similar percentage of deprivation (9%), and no deprivation in indicator water. In village New Poilwa, from the lower-income group; deprivation was from indicator years of schooling, water, sanitation, housing and cooking fuel, with similar percentage of deprivation (34%).

The study (Table no.3.3.3) observed in Peren Urban; from the lower-income group; the highest percentage of deprivation was from indicator years of schooling, housing and

assets, with similar percentage of deprivation (28%), followed by indicator sanitation (22%), and cooking fuel (13%), and no deprivation in indicator water. From the middle-income group; it was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (6%), and no deprivation in indicator water and cooking fuel.

The study (Table 3.3.3) observed, in Midland colony, from the lower-income group; the highest percentage of deprivation was from indicator years of schooling, housing and assets, with similar percentage of deprivation (35%), followed by indicator sanitation (30%), and indicator cooking fuel (14%), and from the middle-income group; it was observed in indicators years of schooling, sanitation, housing and assets, all the indicators with similar percentage of deprivation (15%). No deprivation in indicator water and cooking fuel. In colony Stadium, from the lower-income group; it was indicator years of schooling, housing, assets and cooking fuel with similar percentage of deprivation (10%), and no deprivation in indicator water and sanitation.

4.13. Suggestions and Recommendations

- Improvement of educational Access and Retention

  "Education is rightly regarded as an important component of anti-poverty programs in many developing countries" (Tilak, 2002, p. 18). At the same time, one of the most important factors in breaking the vicious circle of intergenerational transmission of poverty" (Mihai et al., 2015, p. 857). "In order to facilitate education amongst the poverty -stricken individuals, it is essential to make provision of financial assistance, infrastructure, civic amenities, creative activities, instructional strategies and proper teaching-learning methods within schools, so they feel motivated towards learning" (Alamelu & Revathy, 2022, p. 706). Interventions must prioritize educational attainment and living standards, especially in Rural areas and lower-income settings, to reduce multidimensional poverty effectively. The finding that 46% of the population has not completed six years of schooling, indicated significant gaps in educational access. Policies must strengthen the enforcement of the Right to Education (RTE) Act and ensure strict implementation of Sarva Shiksha Abhiyan (SSA), Samagra Shiksha, and related initiatives. Government

efforts should focus on increasing enrolment, reducing dropouts, and improving attendance through schemes like the Mid-Day Meal Scheme (MDMS).

- Targeted Support for Girls' Education

  Gender-specific disparities in education calls for the robust implementation of schemes such as Beti Bachao Beti Padhao (BBBP)and the National Programme for Education of Girls at Elementary Level (NPEGEL). These schemes should be monitored to address gender inequality and promote female literacy and retention in schools.

- Improved Drinking Water Access

  Nagaland lack access to safe, clean drinking water which has perilous effect on the health of the people, especially the elderly and children" (*Water News September 2024: Nagaland | NE Water Talk*, n.d.). With 1% of households lacking access to clean drinking water, there is a need for more effective implementation and monitoring of the Jal Jeevan Mission (JJM). Ensuring proper coverage and maintenance of water supply infrastructure which will help improve the health and living standards in rural areas.

- Sanitation and Hygiene Infrastructure

  "When there is deficiency of nutrition, hygiene and shelter it "lower protection against disease. In order to break the vicious cycle of poverty related to health, "affordable and effective healthcare is a must" (O'Donnell ,2024, p. 3-6). The fact that 14% of households lack improved sanitation facilities highlighted the need for enhanced vigilance and execution under the Swachh Bharat Mission-Gramin. As reported by NE water Talk, SBMG been blocked by insufficient funds and bureaucratic inefficiencies, and because of which "many communities still lack basic sanitation facilities". Policies must focus on behavior change communication, regular field audits, and capacity building at the local governance level to achieve the goal of a zero-defecation state.

- Access to Quality Housing

  The presence of 15% of households without proper housing suggested that the Pradhan Mantri Awas Yojana- Gramin (PMAY-G) scheme has not fully reached the target population. Effective beneficiary identification, transparency, and strict anti-corruption measures are necessary to ensure proper housing for all eligible households.

- Access to cooking fuel

  The presence of 10% of households without having access to clean cooking fuel suggested that Pradhan Mantri Ujjwala Yojana (PMUY) and Ujjwala 2.0 have not been able to reach the true beneficiaries, which calls for vigilant monitoring and awareness so that the scheme reaches its full potential in providing clean cooking fuel to all the poor households.

- Employment opportunities

  "Poverty can be eliminated by providing more employment opportunities so that people may be able to meet their basic needs" (Shaikh, 2024, p. 3092). The finding that 14 % of the households lack assets, is an indication of lack or low or no income, making the poor unable to obtain assets. Schemes like Mahatma Gandhi National Rural Employment Guarantee Schemes (MGNREGS), Deendayal Antyodaya Yojana- National Rural Livelihoods Mission (DAY-NRLM) and Sampoorna Grameen Rozgar Yojana (SGRY), Jawahar Rozgar Yojana and Rural Landless Employment Guarantee Programme etc., needs to be implemented effectively for better opportunity and livelihood through employment opportunities

- Strengthened Governance and Monitoring

  The underperformance of various poverty-alleviation schemes calls for institutional reforms to ensure transparency, accountability, and effectiveness. There is a pressing need for regular third-party audits, digital tracking of beneficiaries, and community-based monitoring to prevent leakages and improve outcomes.

4.14. Conclusions

The findings and the observations have validated that Poverty in Nagaland as multidimensional, where, 22% of the population were found to be multidimensionally poor. The poor population have shown deprivation in non-monetary indicators i.e. indicator years of schooling, water, sanitation, housing, assets and cooking fuel as key areas of deprivation. While health indicators are robust. The highest deprivation was found in indicator schooling (56%), followed by both sanitation and housing; with similar percent of deprivation (15%), assets (14%), cooking fuel (9%) and water (1%), respectively. It was observed, Rural areas (30%) have higher percent of multidimensional poor as against Urban areas (12%), Peren district (29%) have higher percent of multidimensional poor as against Kohima district (7%). The study observed that, deprivation of indicators varies within the same state, same district and even within the areas, and lower-income group remain vulnerable to multidimensional poverty as in Nagaland; 47% of the multidimensional poor were from BPL income group, 30% of the multidimensional poor were from lower income group and 3% of the multidimensional poor were from middle-income group. It would be in the interest of the State to measure poverty using multidimensional aspects of poverty, so as to bring out policies specific to the deprivations faced by the people, and specific to the areas, and also to bring out schemes, which gives more employment opportunities to lift up the deprived lower-income group.

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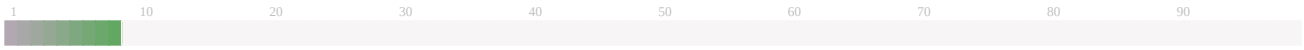

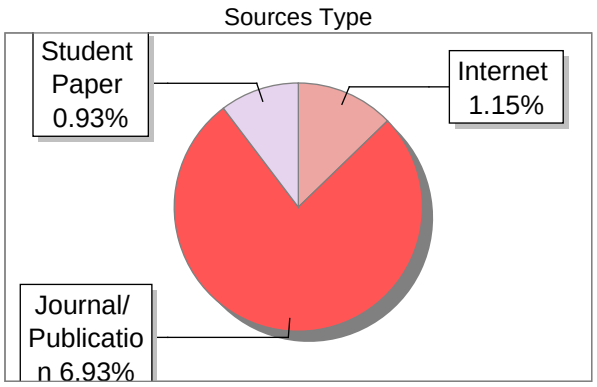

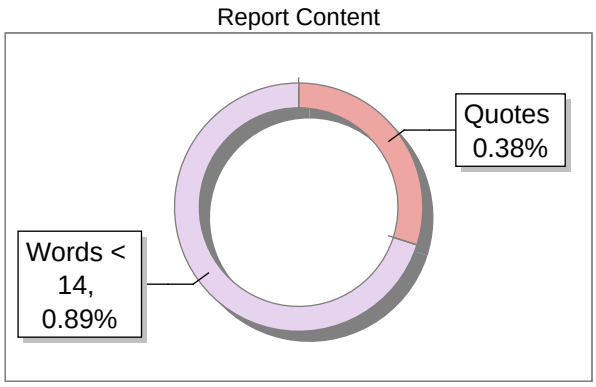

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