EXPENDITURE PATTERN OF HOUSEHOLDS AND HUMAN DEVELOPMENT IN MALAPPURAM DISTRICT: AN ALTERNATIVE PERSPECTIVE

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By

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DECLARATION

I, hereby declare that the work presented in the thesis entitled 'Expenditure Pattern of Households and Human Development in Malappuram District: An Alternative Perspective' is based on the original work done by me under the guidance of Dr. Ibrahim Cholakkal, Professor, Department of Economics, E.M.E.A College of Arts and Science, Kondotti and has not been included in any other thesis submitted previously for the award of any degree. The contents of the thesis are undergone plagiarism check using iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found within the permissible limit. I also declare that the thesis is free from AI generated contents.

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CERTIFICATE

This is to certify that the dissertation titled **'Expenditure Pattern of Households and Human Development in Malappuram District: An Alternative Perspective'** is the record of the original work done by **Saleel Ahammed. A. K.** under my guidance and supervision. The results of the research presented in this thesis have not previously formed the basis for the award of any degree, diploma, or certificate of this institute or any other institute or university.

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ABSTRACT

This study provides an in-depth analysis of the relationship between human development and household expenditure patterns in Malappuram district, Kerala, India. The main goal is to examine how household spending behaviour impacts human development. To achieve this, the research has been guided by four primary objectives, with specific hypotheses to test various aspects related to human developments, household expenditures, and their interconnections. The study utilizes a hybrid methodology that combines both qualitative and quantitative research approaches. The research is structured into seven chapters, guiding the reader from the introduction through the review of literature, theoretical frameworks, background information on the study area, assessments of human development, analyses of expenditure patterns, the relationship between expenditure patterns and human development and the measuring income inequality.

Objective 1: Evaluating the Quality of Human Development in Malappuram District.

The study begins by assessing the quality of human development in Malappuram district through considering variables such as health, education and standerd of living. In 2005, Malappuram district ranked 14th in Kerala with an HDI score of 0.749, but as per the study it was found that HDI is 0.4165, indicating significant gaps in human development factors, apart from that education index has more impacts on HDI than health and income indices. Gender-wise, there is no big difference in HDI between males and females, suggesting similar development levels.

Objective 2: Identifying Household Expenditure Patterns in Malappuram District.

The study moves on to identify the expenditure patterns of households in Malappuram district to understand the priorities and trends in how resources are allocated across various categories. It is evident that essentials such as food, clothes, education and medical expenses are the dominant part in household

budgets, while luxury items occupy smaller share. The analysis also considers variations in spending patterns across different groups based on gender, ration card type, family structure, place of residence and age.

Objective 3: Examining the Influence of Expenditure Patterns on Human Developments.

The study investigates the impact of household expenditure patterns on human development. This exploration yields insights into how various expenditures correlate with health, happiness, freedom, and education. The findings reveal that economic, social, and cultural factors are interconnected with spending behaviour of households in Malappuram district. Expenditure for medical, food and education have a significant impact on human development index in Malappuram district while other expenditure categories including clothing, entertainment, fuel, and functions did not show significant impact on HDI.

Objective 4: To Explore the Impact of Income Disparities on Human Development.

The Gini coefficient 0.60 shows moderate income inequality is in the surveyed population. There is a noticeable gap between high and low earners. The negative correlation (-0.439) between income inequality and human development index (HDI) means as income inequality rises, HDI tends to decrease. This relationship is statistically significant (p-value = 0.000), indicating a strong correlation in the sample data.

In conclusion, this study offers a broad information on various aspects of human development in Malappuram district through highlighting disparities, demographic influences, and the need for targeted policy interventions to enhance the quality of life in the region. The study concludes with recommendations for addressing income inequality, promoting education and healthcare in qualitative aspect, fostering inclusive economic growth, strengthening communities, and encouraging responsible expenditure patterns.

Keywords: *Demographics, Disparities, Education, Healthcare, Household Expenditure Patterns, Human Development, Income Inequality, Infrastructure*

സംഗ്രഹം

ഇന്ത്യയിലെ മലപ്പുറം ജില്ലയിൽ കുടുംബങ്ങളുടെ ചിലവ് രീതിയും മാനവ വികസനവും തമ്മിലുള്ള ബന്ധത്തെ കുറിച്ചാണ് ഈ ഗവേഷണം പ്രതിപാദിക്കുന്നത്. ഗവേഷണത്തിന്റെ പ്രധാനപ്പെട്ട ലക്ഷ്യം എങ്ങനെയാണ് കുടുംബത്തിന്റെ ചെലവ് രീതി, മാനവ വികസനത്തെ സ്വാധീനിക്കുന്നു എന്നതാണ്. ഈ ഗവേഷണത്തിന് നാല് ലക്ഷ്യങ്ങളും ഉണ്ട്. ഓരോ ലക്ഷ്യവും വിശകലനം ചെയ്യാൻ വേണ്ടി ഗണപരമായതും, ഗുണപരമായതുമായ വിശകലന രീതിയാണ് ഉപയോഗിച്ചിട്ടുള്ളത്. ഗവേഷണത്തിന് 7 അധ്യായങ്ങൾ ആണുള്ളത്. ആമുഖം മുതൽ സാഹിത്യത്തിന്റെ അവലോകനം, പഠന മേഖലയെ കുറിച്ചുള്ള പശ്ചാത്തല വിവരങ്ങൾ, മാനവ വികസനത്തിന്റെ വിശകലനം, കുടുംബങ്ങളുടെ ചെലവ് രീതി, മാനവ വികസനവും കുടുംബത്തിന്റെ ചെലവും തമ്മിലുള്ള ബന്ധം, വരുമാനത്തിന്റെ അസമത്വം മനസ്സിലാക്കൽ തുടങ്ങിയവയാണ്.

ലക്ഷ്യം ഒന്ന് : മലപ്പുറം ജില്ലയിലെ *മാനവവികസനത്തിന്റെ ഗുണനിലവാരം വിലയിരുത്തൽ.*

ആരോഗ്യം, വിദ്യാഭ്യാസം, ജീവിതനിലവാരം തുടങ്ങിയ മാനദണ്ഡങ്ങൾ ഉപയോഗിച്ച് മലപ്പുറം ജില്ലയിലെ മാനവ വികസനത്തിന്റെ ഗുണനിലവാരം വിലയിരുത്തുന്നതിലൂടെ ആണ് ഈ പഠനം ആരംഭിക്കുന്നത്. 2005ൽ മലപ്പുറം ജില്ലയിലെ മാനവ വികസന സൂചിക മൂല്യം 0.794 ആണ് (NSSO 68th Round), കൂടാതെ മലപ്പുറം ജില്ല കേരളത്തിൽ മാനവ വികസന സൂചിക നിലവാരത്തിൽ പതിനാലാം സ്ഥാനത്താണ്. എന്നാൽ ഈ പഠനമനുസരിച്ച് മലപ്പുറം ജില്ലയുടെ മാനവ വികസന സൂചികയുടെ മൂല്യം 0.4165 ആണെന്ന് കണ്ടെത്തി. ഈ കണ്ടെത്തൽ മാനവ വികസന സൂചികയുടെ വിവിധ ഘടകങ്ങളുടെ ഗുണനിലവാരം കുറവാണെന്ന് സൂചിപ്പിക്കുന്നു. പഠനത്തിൽ വിദ്യാഭ്യാസ സൂചികയാണ് ആരോഗ്യ വരുമാന സൂചികകളെക്കാളും, മാനവ വിഭവസൂചികയിൽ കൂടുതൽ സ്വാധീനം ചെലുത്തുന്നത്. ഇതിന് പുറമെ സ്ത്രീകളും പുരുഷന്മാരും തമ്മിലുള്ള മാനവ വിഭവസുചികയുടെ മൂല്യത്തിൽ കാര്യമായ വ്യത്യാസങ്ങൾ ഒന്നുമില്ല.

ലക്ഷ്യം രണ്ട് : മലപ്പുറം ജില്ലയിലെ *ഗാർഹിക ചെലവ് രീതികൾ തിരിച്ചറിയുക.*

മലപ്പുറം ജില്ലയിലെ ആളുകൾ ഏതൊക്കെ വിഭവങ്ങൾക്ക് വേണ്ടി പണം ചെലവാക്കുന്നു എന്ന് മനസ്സിലാക്കുകയാണ് ഇതിന്റെ ലക്ഷ്യം. പഠനം കാണിക്കുന്നത് മലപ്പുറം ജില്ലയിലെ ഭൂരിഭാഗം ആളുകളും പണം

ചെലവാക്കുന്നത് ഭക്ഷണം, വസ്ത്രം, ആരോഗ്യം, വിദ്യാഭ്യാസം, അഥവാ അടിസ്ഥാന ആവശ്യങ്ങൾ നിറവേറ്റാൻ വേണ്ടിയാണ്. അതേസമയം ആഡംബരമായ വസ്തുക്കൾക്ക് പണം ചെലവാക്കുന്നത് കുറവാണ്. റേഷൻ കാർഡ് തരം, കുടുംബഘടന, താമസിക്കുന്ന സ്ഥലം, പ്രായം, ലിംഗഭേദം എന്നിവ അടിസ്ഥാനമാക്കി ചെലവ് രീതി വിശകലനം ചെയ്തിരിക്കുന്നു.

ലക്ഷ്യം മൂന്ന് : *ഗാർഹിക ചെലവ് എങ്ങനെയാണ് മാനവ വികസനത്തെ സ്വാധീനിക്കുന്നത് എന്ന് മനസ്സിലാക്കൽ.*

ഈ ലക്ഷ്യം കാണിക്കുന്നത് എങ്ങനെയാണ് കുടുംബങ്ങൾ, ആരോഗ്യം, വിനോദം, വിദ്യാഭ്യാസം തുടങ്ങിയവക്ക് വേണ്ടി പണം ചെലവാക്കുന്നു എന്ന് മനസ്സിലാക്കുന്നതിന് വേണ്ടിയാണ്. ഈ പഠനം കണ്ടെത്തിയത് മലപ്പുറം ജില്ലയിലെ മാനവ വികസന സൂചികയെ വിദ്യാഭ്യാസ ചെലവ്, ഭക്ഷണ ചെലവ്, ആരോഗ്യചെലവ് എന്നിവ കാര്യമായ സ്വാധീനം ചെലുത്തുകയും എന്നാൽ വസ്ത്രം, വിനോദം, ഇന്ധനം, ചടങ്ങുകൾ തുടങ്ങിയ ചെലവുകൾ മാനവ വികസനസൂചികയെ കാര്യമായി സ്വാധീനിക്കുന്നില്ല.

ലക്ഷ്യം നാല് : *മാനവ വികസനത്തിൽ വരുമാന അസമത്വത്തിന്റെ സ്വാധീനം മനസ്സിലാക്കൽ.*

പഠനം കാണിക്കുന്നത് മലപ്പുറം ജില്ലയിലെ ജനങ്ങൾക്കിടയിൽ മിതമായ രീതിയിൽ വരുമാന അസമത്വമാണ് കാണിക്കുന്നത്. ഇതിന് ഗിനി കോ എഫിഷ്യന്റ് ഫലം 0.60 ഇതിനെ പിന്താങ്ങുന്നു. വരുമാനഅസമത്വവും മാനവ വികസനവും തമ്മിലുള്ള ബന്ധം നെഗറ്റീവ് കോറിലേഷൻ ആണ് കാണിക്കുന്നത് (−0.439). അതായത് വരുമാനഅസമത്വം വർദ്ധിക്കുമ്പോൾ മാനവ വികസന സൂചിക കുറയുകയും, അതുപോലെ വരുമാനഅസമത്വം കുറയുമ്പോൾ മാനവ വികസന സൂചിക വർദ്ധിക്കുകയും ചെയ്യുന്നു.

ഉപസംഹാരമായി ഈ പഠനം മലപ്പുറം ജില്ലയിലെ മാനവ വികസനത്തിന്റെ വിവിധ വശങ്ങളെ കുറിച്ച് വിശാലമായ വിവരങ്ങൾ നൽകുന്നു. വരുമാന അസമത്വം പരിഹരിക്കുക, വിദ്യാഭ്യാസത്തിന്റെയും ആരോഗ്യപരിപാലനത്തിന്റെയും ഗുണപരമായ വശങ്ങൾ പ്രോത്സാഹിപ്പിക്കുക, സാമ്പത്തിക വളർച്ചയെ പ്രോത്സാഹിപ്പിക്കുക, സമുദായങ്ങളെ ശക്തിപ്പെടുത്തുക, ഉത്തരവാദിത്തമുള്ള ചെലവ് രീതികൾ പ്രോത്സാഹിപ്പിക്കുക തുടങ്ങിയ ശുപാർശകളോട് കൂടിയാണ് ഈ പഠനം അവസാനിപ്പിക്കുന്നത്.

സൂചകപദങ്ങൾ: ജനസംഖ്യാശാസ്ത്രം, അസമത്വം, വിദ്യാഭ്യാസം, ആരോഗ്യപരിപാലനം, ഗാർഹിക ചെലവ് പാറ്റേണുകൾ, മാനവ വികസനം, വരുമാന അസമത്വം, അടിസ്ഥാന സൗകര്യങ്ങൾ.

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LISTOFABBREVIATIONS

APL	:	Above Poverty Line
BPL	:	Below Poverty Line
CAGR	:	Compound Annual Growth Rate
CBR	:	Crude Birth Rate
CDVI	:	Cuddy-Della Valle Index
CDR	:	Crude Death Rate
CHAID	:	Chi-squared Automatic Interaction Detector
CV	:	Coefficient of Variation
DPI	:	Gross Domestic Product
EG	:	Economic Growth
GDI	:	Gender Development Index
GDP	:	Gross Domestic Product
GNI	:	Gross National Income
HD	:	Human Development
HDR	:	Human Development Report
HDI	:	Human Development Index
HI	:	Health Index
HPI	:	Human Poverty Index
HIV	:	Human Immunodeficiency Virus
IMR	:	Infant Mortality Rate
INFLIBNET	:	Information and Library Network

LPG	:	Liberalization, Privatization and Globalization
MPI	:	Multidimensional Poverty Index
NSSO	:	National Sample Survey Organization
PQLI	:	Physical Quality of Life Index
SDGs	:	Sustainable Development Goals
SDP	:	State Domestic Product
UN	:	United Nations
UNDP	:	United Nations Development Programme
YI	:	Income Index

CHAPTER I
INTRODUCTION

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Human development and human resource development are two closely related concepts. Both focus on improving the capabilities and skills of individuals. Their aims are enhancing overall welfare and contributing to the progress of society. While they share similarities, there are some differences between these two concepts. Human Development is the process of expanding people's freedoms, options and opportunities. It includes every component of human existence, such as the political, social, and economic ones. The goal of human development is to make people to their maximum potential and satisfying their lives. Human resource development (HRD) places more emphasis on raising the quality of life than economic prosperity. The goal of HRD is to get a better output to the society and state, and also it aims to improve the capacity of people. So, they can effectively contribute to their organisations and society at large. Amartya Sen and Mahbub ul Haqt are the two well know economists who contributed the major parts to the human development in the late 1980. According to the human development perspective, human growth is the process by which people become more skilled as a result people's options and choices increase.

The goal of human development is to improve people's well-being by fostering their potential and encouraging participation. Prioritising longevity, well-being, education, and attaining a decent level of living are the main decisions highlighted in the first Human Development Report (1990). During late 1960s and early 1970s there had been a shift in development debate, given more importance on social development than both economic growth and capital accumulation. As a result, the 'basic needs' was given the major priority for the overall development of the society

Human Development is a multi-dimensional process that involves changes in social structure, public attitudes, national institutions, and the living standard of people. According to Amartya Sen and Mahbubul Haq, human development is the process of expanding the freedom that people enjoy. It is a general and comprehensive approach that needs to overcome the factors for dependency like poverty and injustice, poor economic opportunities, including social exclusion and neglect of public facilities. According to Human Development Report (1990), "human development is a process in which people shall enjoy more opportunities including

longevity and healthy life, education and enjoyment of a good standard of living. We can say that human development has two aspects: first is related to human capabilities, such as improved health, knowledge, and skills. The second aspect is their capability to have more opportunities and benefits, in active political, social and cultural issues. This approach helps to build human capabilities in various areas of health, knowledge and active participation. It helps to fulfill basic needs, the focus on the ability to create jobs and increase prosperity. All these lead to attain economic prosperity of the country.

There is a complex relationship between consumption and human development that considers social, economic and developmental factors. Sufficient funding for basic needs improves health, well-being and education leads to better human development. When consumption expenditures are allocated to educational fecilities such as school fees, books, and educational resources it helps both individual and society to get better outcome. Increased income is frequently correlated with higher consumer expenditures, which are important in reducing poverty and promoting economic growth, job creation and higher living standards. In less developed nations, the concentration of wealth and less expenditure habits may lead to problems like widening inequality, escalating poverty and increasing social exclusion. In the long run, economic development affects living standards and causing significant changes in a socio-economic and cultural life. After the independence of India, agrarian economy has brought numerous changes in the socio-economic circumstance. The main factors to have an impact on consumption expenditure patterns of India are variations in the availability of natural resources, physical and climatic circumstances, economic factors like income, pricing, and the degree of industrialization, demographic factors like household size and level of urbanization, and cultural elements. All these differences are reflected in the widening inequality in the distribution of consumption expenditure in India. These are the facts which encourage us to examine along with nature of changing allocation of expenses on various households for consumption over time.

It is quite clear to trace human growth by going through the consumption-spending pattern of the society because it displays the level of life of the individuals. Every

economy exhibits a distinctive pattern in how consumers allocate their spending on different goods and services according to their needs and preferences, and India is no exception. Most of the population of India depends on agriculture as their means of life. The idea of wellbeing has changed over time to become more materialistic as western culture has grown more ingrained in people's lives. According to Ger (1997), as people seek the good life in consumption, societies seek it in economic development. The consumer mentality is reflected in the views of what development entails—material progress. But for a developing society like India, this material progress often comes at the cost of sacrificing some of the basic needs of human development which is very interesting. At the macro level, it is impossible to trace those sacrifices as they vary from person to person and some might not admit at all that they had sacrificed cost on any basic item of consumption to own any commodity of status appeal that brings a sense of pride to such consumers.

Kerala is best in human development, which are seen in high levels of health, education and standard of living enjoyed by its citizen. (Indian Human Development Report - 2011). The advancement in the health and education sectors are the highlights of the Kerala from other states in India. A community's socioeconomic, educational, environmental, biological and political elements are believed to have an impact on its health status. Today, Kerala State is well known for having a Physical Quality of Life Index (PQLI) that is significantly higher than the national average (HDR 2005). Even though Kerala's low level of agricultural and in industrial production, it has the in excellent level of social indicators, that is an irony. (George, 1998). Higher economic growth is a sign of developing entrepreneurial activities that boost personal earnings, living standards, and capability development. A population that is healthy, well-fed and educated is more likely to experience improved economic possibilities. Even if improving capacities, merely raising literacy and health levels won't help much if people lack the opportunities to employ these gains to improve economic situations. Kerala serves as an illustration of this occurrence. Due to limitations on the expansion of productive capacity, entrepreneurial activities are hidden from public view, projecting a picture of poverty through official income statistics while demonstrating remarkable

advancements in human development, thus spreading the idea of a paradox or a model to be emulated.

Malappuram is the Muslim majority district in Kerala, is a backward region in both economic and social terms. According to the 2011 census, its literacy rate is ranked 9th and it has the 14th (lowest) per capita income. Due to the district's dense population, the infrastructure, educational institution of public sector and services in Malappuram are inadequate. But the district's educational and health quality was somewhat improved by the private sector's contribution. According to Mujeeb Rahman and Bassam (2017) the Human Development Index of the Malappuram district is lower than that of the state of Kerala, and in order to raise it, adequate steps must be taken in the areas of standard of living, health, and education. Provide more chances for income-generating activities to boost the per capita income.

1.1 Statement of the Research Problem

The connection between households spending pattern and degree of human development in the dynamic and growing field of developmental studies have emerged as an attractive and challenging study. According to Dyuti Sinha, and Aniklal Adhikary (2020) is a strong relationship between consumption and development since the rising the standard of living has enlarged and enriched the choices and the capabilities of the households, because per capita GDP and per capita consumption are now widely recognised as inadequate for capturing the "Quality of life" in a society.

Kerala presents a unique and complex case in the model of human development. Despite there are substantial investments in education and healthcare, the state's economic performance is still overshadowed by certain challenges. Notably, Kerala faces the paradox of high human development co-existing with significant issues, such as a growing population of educated unemployed as well as a rising burden of non-communicable diseases like cardiovascular diseases, cancer and diabetes. All these ultimately lead to the health paradox of Kerala (Low mortality rate with high morbidity rate -Navaneethan et al. 2006).

The study focuses Malappuram district of Kerala State, which has a relatively low expenditure pattern (NSSO 68th Round) while receiving significant foreign remittances and having the progressive Human Development Index (HDI) score of 0.749 (it is lowest among other districts of Kerala) but an above average human development. This disparity prompts serious inquiries into the qualitative dimensions of human development. This research investigates, whether the quantitative achievement of HDI in Malappuram district is actually match with the qualitative aspect of HDI? It also inspires an investigation of social, educational, and cultural aspects that affect human well-being in addition to economic indicators. By alternative perspective in the title, the researcher intends to a somewhat qualitative approach in measuring human development in Malappuram district.

1.2 Research Questions

1. How do households in Malappuram district allocate their expenditures across different categories?
2. What is the relationship between the expenditure pattern of households and the quality of human development in Malappuram district?
3. To what extent does the expenditure pattern of households influence the quality of human development in Malappuram district?
4. How do household expenditures in Malappuram district contribute to the determinants of quality of human development?
5. Are there specific expenditure categories that have a stronger impact on the quality of human development in Malappuram district?
6. How do socio-economic factors influence both the expenditure pattern of households and the quality of human development in Malappuram district?
7. What are the current challenges and barriers faced by households in Malappuram district in improving the quality of human development?

1.3 Objectives of the Study

The broad objective of the study is to cross examine the cause-and-effect relationship between the expenditure patterns of households' and human development in Malappuram district. The study has been undertaken keeping in mind the following few important objectives:

1. To evaluate the quality of human development in Malappuram district.
2. To examine the expenditure pattern of households in Malappuram district.
3. To find out the influence of the expenditure pattern of households on quality of human development in Malappuram district.
4. To explore the impact of income disparities on the quality of human development in Malappuram District.

1.4 Hypotheses

The hypothesis is a tentative statement which is to be tested. The testing of hypothesis may either accept the statement or reject it. The study includes the following limited hypotheses.

I. General hypothesis: socio-economic factors are affecting the quality of life.

Specific Hypothesis:

1. H_o: There is no significant difference in the HDI with respect to education qualification.

   H_1: There is a significant difference in the HDI with respect to education qualification.

2. H_o: There is no significant difference in the HDI with respect to occupation and income.

   H_1: There is a significant difference in the HDI with respect to occupation and income.

3. H_o: There is no significant difference in the HDI with respect to community.

   H_1: There is a significant difference in the HDI with respect to community.

II. General hypothesis: Expenditure pattern of households varies with income and occupation

Specific Hypothesis:

1. H_o: There is no association between income and expenditure pattern of households.

   H_1: There is an association between income and expenditure pattern of households.

2. H_o: There is no association between occupation and expenditure pattern of households.

   H_1: There is an association between occupation and expenditure pattern of households.

1.5 Significance of the Study

The three main pillars of human development are education, health, and standard of life. It equips people with the knowledge, abilities, and capacity for critical thought necessary to engage in social, economic, and political life with impact. People who receive a high-quality education are given the means to better their lives, end the cycle of poverty, and advance society. It encourages creativity, originality, and overall cognitive growth. Healthier people are more likely to go to school on time, do well in class, and get involved in their communities. Furthermore, being in excellent health enables people to seize chances, realise their full potential, and lead fulfilling lives. The level of material well-being that people and communities experience is referred to as the standard of living. It includes a number of elements like income, career prospects, housing, infrastructure, and access to necessities. A greater level of living gives people the means and capacity to meet their essential requirements, enhance their quality of life, and make investments in the future.

The human development is significantly influenced by factors including education, health, and level of living. These variables interact and have complex effects on one another. The purpose of this study is to better understand how resource allocation affects many aspects of well-being and quality of life by examining the spending habits of households in the Malappuram district and their effects on human development. As they create targeted interventions and policies to support equitable and sustainable human development outcomes in the district, policymakers and development practitioners will benefit greatly from the findings. Additionally, the study's findings might have broader result which is influencing household-level economic decision-making techniques that will enhance human development. Therefore, this study has special significance.

1.6 Research Methodology

This research follows a hybrid methodology, combining both qualitative and quantitative approaches, to address the research objectives effectively. To gain insights into the decision-making processes at the policy level, a combination of quantitative and qualitative data analysis techniques were employed. Statistical analysis methods, such as percentage analysis, growth rate calculations, compound annual growth rate determination, average annual growth rate estimation, mean calculations, standard deviation assessments, cross tabulation, chi-square tests, one-way ANOVA, paired t-tests, independent t-tests, various regression models (including multiple and multinomial models), CDVI index, Gini Coefficient and non-parametric tests (in some cases), were applied to analyse the collected data.

1.6.1 Source of Data

Both the primary and secondary data were collected for the present study, the primary data were collected from the people in Malappuram district using a structured questionnaire, which includes different questions to get accurate information on various aspects required for the study. Secondary data were collected for the study is from various reports of government and private publications to get information about human development and expenditure and income pattern in India and Kerala. Secondary data sources are human development

reports, National Sample Survey Office (NSSO)68th round, Surveys of Ministry of Human Resource Development (MHRD), Books, magazines, periodicals, research dissertations, and online databases like INFLIBNET and Google Scholar were also used. The secondary data gathered are pooled in nature and comprise cross section and time series data.

1.6.2 Sample Design

The study on "Expenditure Pattern of Households and Human Development in Malappuram District" employed a cluster sampling technique for data collection. The population of Malappuram district was divided into six based on taluks, namely Tirur, Ernad, Tirurangadi, Perinthalmanna, Nilambur and Ponnani. Next, a proportional sample was selected from each taluk to get accurate sample size for the study using a simple random sampling method. This sampling approach helps to ensure that the findings of the study can be generalized to the larger population and provide insights into the expenditure patterns and their relationship with human development in the district. The details are given below:

Sample design

Taluk	Population	Sample
Tirur	928672	87
Ernad	910978	85
Tirurangadi	713017	67
Perinthalmanna	606396	57
Nilambur	574059	54
Ponnani	379798	37
Total	4112920	386

Source: Census of India, 2011

The above table shows sample design which ensures that the study captures a representative sample from each taluk, allowing for the analysis of expenditure patterns and their relationship with human development indicators in different areas of Malappuram district.

Total Number of Population in Malappuram District: 4112920 (Census of India, 2011)

Sample size (n): 386

This means 386 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within ±5% of the measured/surveyed value.

$$n_0 = \frac{Z^2 pq}{e^2}$$

n_0 = is the sample size

z = Level of confidence (commonly used the value 95% confidence level is approximately1.96)
e = is the desired level of precision (5 percent=0.05)
p = is the population proportion (50 percent=0.5)

q = 1 – p

1.6.3 Statistical Analysis

The data collected for the study on "Expenditure Pattern of Households and Quality of Human Development in Malappuram District: An Alternative Perspective" were analysed using a wide range of statistical techniques and methods. These analytical approaches were employed to gain insights into the relationships and patterns within the dataset. The following statistical analyses were conducted:

- Percentage Analysis: Percentage analysis was used to determine the relative distribution of variables and their contributions within the dataset.
- Growth Rate, Compound Annual Growth Rate, and Average Annual Growth Rate: These measures were employed to assess the rate of change and trends over time in various variables related to expenditure patterns and human development.

- Mean and Standard Deviation: Mean and standard deviation were calculated to understand the central tendency and dispersion of the variables under investigation.

- Cross Tabulation and Chi-Square Test: Cross tabulation and chi-square test were used to explore the relationships between categorical variables and examine their associations.

- One-Way ANOVA: One-way analysis of variance (ANOVA) was conducted to assess the differences in means among multiple groups and determine the significance of these differences.

- Paired t-test and independent t-test: Paired t-tests and independent t-tests were utilized to compare means between related or independent groups, respectively.

- Regression Models: Multiple Regression and Multinomial Regression were applied to examine the relationships between dependent and independent variables and to identify significant predictors.

- Cuddy-Della Valle Index (CDVI)*:* The measurement of instability can be approached through various methods, including commonly used techniques such as the coefficient of variation (CV) and dispersion. Additionally, there are specialized indices available, such as the Cuddy-Della Valle Index (CDVI), which offers alternative ways to assess instability in different contexts. These diverse approaches contribute to a comprehensive understanding of instability.

- **Other tools**

  Growth Rate = [(Present-Past)/past] *100

  Average Annual Growth Rate = sum of each year's growth rate / No. of Years

  Compound Annual Growth Rate = $[(final/begin)^{1/n} -1] *100$,

n = number of years

$\chi^2 = \sum (O_i - E_i)^2/E_i$, **where** O_i = Observed value (actual value) and E_i = expected value

Observed value = Actual Count, Expected Vale = (Row Total x Column Total)/Overall Total

H_0: There is no association between categorical variables

H_1: There is an association between categorical variables

Decision: Calculated value is greater than table value reject null hypothesis otherwise accept it

Independent Sample t-test

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

Where $\bar{X}_1$ = Mean of Group 1

$\bar{X}_2$ = Mean of Group 2

S_1 = Standard Deviation of Group 1

S_2 = Standard Deviation of Group 2

N_1 = Number of Observation Group 1

N_2 = Number of Observation Group 2

H_0: Population means from the two unrelated groups are equal

H_1: Population means from the two unrelated groups are not equal

Decision: Calculated value is greater than table value reject null hypothesis otherwise accept it

Calculation of Human Development Index (HDI) in Malappuram

The Human Development Index (HDI) is a widely recognized composite index that measures the overall development of countries based on three key dimensions:

- Life Expectancy: This dimension reflects the health and well-being of a nation's population. It is measured by the average number of years a person

is expected to live from birth. Higher life expectancy indicates better access to healthcare, nutrition, and overall living conditions.

- Education: The education dimension captures both the quantity and quality of education within a country. It is assessed through mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age.

- Gross National Income (GNI) per capita: This dimension reflects the economic well-being of individuals within a country. GNI per capita measures the average income earned by residents, including income from both domestic and international sources. It provides an indication of the standard of living and economic opportunities available to citizens.

Education Index

The quality of education index was constructed based on the following factors

1. Average years of schooling

The average year of education of the household members was used to categorize the education level of the households:

Average Year of Education of Household	**Value**
Primary (1-7)	1
High School (8-10)	3
Higher Secondary (11-12)	5
Graduation (13-15)	7
Above Graduation (16 and above)	9

2. My job is exactly matched with my educational qualification:

Strongly agree =5 Agree =4 neutral =3 disagree =2 strongly disagree =1

3. Percentage of mark

Below 30% =1 30% - 49% =2 50% - 69%=3 70% - 89%=4

90% and above=5

Quality of Health Index

The quality of health index was constructed based on the following health related habits of consumption.

1. In general, how do you rate health status?

   Excellent =5 Very Good =4 Good= 3 Average =2 Poor=1

2. How do you feel about mental health?

   Excellent =5 Very Good =4 Good= 3 Average =2 Poor=1

3. What about Physical activity?

   Daily =4 Weekly =3 Monthly=2 Never=1

4. Over the past two weeks how often have you felt nervous or anxious?

   Nearly every day=1 frequently=2 Several days=3 Not at all=4

5. Over the past two weeks how often have you felt depressed or hopeless?

   Nearly every day=1 Frequently =2 Several days=3 Not at all=4

6. Over the past two weeks, how often have you felt pleasure in doing things?

   Nearly every day=4 Frequently =3 Several days=2 Not at all=1

7. Vaccination status

   Fully vaccinated=3 Partially vaccinated=2 Not vaccinated=1

8. Timely food consumption

   Regularly=3 Sometimes=2 Never=1

9. Use of intoxicants

   Regularly=1 Sometimes=2 Never=3

10. Smoking

    Regularly=1 Sometimes=2 Never=3

11. Leisure in a week

    2 hours=1 4 hours=2 6 hours=3 8 hours=4 10 hours =5

    More than 10 hours=6

12. Quality of drinking water

    Excellent = 5 Very Good =4 Good= 3 Average = 2 Poor=1

Income Index

Income Index of households was calculated by dividing the total monthly income from all the sources of household by number of household members (Average income of households).

All the above-mentioned indices were standardized by the formula,

$$\textbf{Index standardisation} = \frac{\mathbf{Xi - Min(Xi)}}{\mathbf{Max\ Xi - Min(Xi)}}$$

Therefore, all the index values come in the range between 0 and 1. While zero means the perfect negative situation, and one means the perfect positive situation. A movement from 0 to 1 means favourable situation in that index. For the analysis, all indices are ranked as Low (0 - 0.550), Medium (0.550 - 0.699), high (0.700- 0.799) and very high (above 0.800).

For the construction of Human Development Index in Qualitative way the Quality of education index, as a proxy for the Education Index, the Quality of health index as a proxy for the Life Expectancy Index and income Index as a proxy for Gross National Product (GNP) were used.

$$HDI = 3\sqrt{Helth\ index\ X\ Education\ index\ X\ Income\ index}$$

1.7 Scheme of the Study

The study is organised and reported in seven chapters.

Chapter I: Describes the general context, the concept of the study, need and significance of the study, statement of the problem, objectives, and hypotheses set for the study, definition of key terms, designs of the study and discusses the methodology in brief and scope and limitations of the study.

Chapter II: Presents the related theoretical framework and extensive review of literature on human development.

Chapter III: Discusses the background of the study, which comprises human development statistics in global, national and regional perspectives.

Chapter IV: Deals Human Development in Malappuram District. In this chapter, the focus is on analysing human development in Malappuram district specifically.

Chapter V: Delves into the pattern of household expenditure in Malappuram district and their impact on Human Development

Chapter VI: Finds the relationship between income inequality and its effect on quality of human development

The final chapter of the thesis summarizes the major findings from the study and presents the conclusion. It brings together the results of the analysis conducted in the previous chapters.

1.8 Limitations of the Study

1. This study includes the response of a particular time only.
2. Many of the respondents were reluctant to provide complete information relevant to the study.
3. Limited access to the secondary data

4. This is an exploratory study based on a sample survey. The limitation of such a study is applicable to this study also.

Despite these limitations, serious efforts have been made to reach reasonable, unbiased, and representative conclusions by analysing the data collected appropriately and accurately.

CHAPTER II

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

CONTENTS

This chapter provides a comprehensive overview of the theoretical framework and review of literature which focuses on examining the relationship between the expenditure pattern of households and the quality of human development in Malappuram district. The chapter begins by presenting the theoretical foundation that underpins the study, followed by the review of literature.

2.1 Theoretical Framework

The theoretical framework serves as the foundation for understanding the complex interplay between household expenditures and human development in the context of Malappuram district. The study draws upon the Human Development Theory, which posits development should not be solely measured by economic growth but also by the enhancement of human capabilities and well-being. The framework also incorporates the concept of the Household Expenditure Theory, which explores the determinants and patterns of household spending behaviour. By combining these theoretical perspectives, the research aims to shed light on the causal relationship between expenditure patterns and the quality of human development. The current section deals with the following themes.

1. Theories on Economic Growth: The study of economic growth theories encompasses a range of perspectives, each offering distinct explanations and emphasizing different factors and mechanisms. From classical models that focus on capital accumulation to contemporary theories that highlight the role of innovation and entrepreneurship, these frameworks contribute to our understanding of the complexities and dynamics of economic progress.

2. Human Development Theory: Explores the concept of human development and its multidimensional nature, emphasizing the importance of capabilities and well-being beyond economic indicators.

3. Household Expenditure Theory: Discusses the theoretical underpinnings of household spending behaviour, factors influencing expenditure patterns, and their impact on household well-being and development outcomes.

4. The relationship between Expenditure Patterns and Human Development: Investigates the cause-and-effect relationship between household expenditure patterns and the quality of human development, considering various socio-economic determinants.

5. Determinants of Household Expenditure Patterns: Identifies and analyses the factors that shape household expenditure patterns in the context of Malappuram district, including income sources, education, health status, and cultural influences.

2.1.1 Theories on Economic Growth

A crucial role in understanding the factors and mechanisms that drive expansion and development of economics are played by theories on economic growth. Framework for analysing the various determinants and processes that contribute to sustained increases in the production and wealth of nations are provided by these theories. By exploring the underlying principles and dynamics of economic growth, these theories offer valuable insights for policy makers, researchers, and economists seeking to promote prosperity and enhance living standards. A range of perspectives encompassed by the study of economic growth theories, each providing distinct explanations and emphasizing different factors and mechanisms. From classical models that focuses on capital accumulation to contemporary theories that highlight the role of innovation and entrepreneurship, these frameworks contribute to our understanding of the complexities and dynamics of economic progress. An overview of some key theories on economic growth, highlighting their central concepts and contributions, is aimed to be provided by this section. By delving into these theories, we can gain a deeper understanding of the factors that drive economic growth, identify key determinants and mechanisms, and explore the implications for policy and development strategies. Theories on economic growth offer explanations for why some economies experience sustained growth over time while others struggle to achieve similar levels of progress. They shed light on the interplay between factors such as capital investment, technological advancements, human capital development, institutional frameworks, and innovation. Moreover, these theories

recognize that economic growth is a complex and multifaceted phenomenon influenced by a combination of endogenous and exogenous factors.

During the 1950s and 1960s, many researchers in the fields of economics and beyond saw increased physical capital accumulation as the primary driver of rapid and sustained economic expansion. However, conventional physical capital alone could not account for the western economies' rapid rise over time, proving that physical capital is not a necessary prerequisite for quick and sustainable economic growth and development. (Shultz, 1961and Mincer, 1981).

Mercantilism is attributed with having been invented by Antoine de Montchrestien, a French economist and author of the 16th century. Mercantilists believed that country's power was determined by the total number of goods it produced. They collected money in the form of precious metals and coins. It was the key to economic development and national prosperity. That is why they placed a strong emphasis on exports. During the mercantilist era, this strategy influenced trade practises and economic policies. It is likely that William Petty's Political Arithmetic, which was published after his death in 1690, contained the first estimation of a country's stock of human capital made about 1676. It was he who first assigned labourers a value in economics. This number was used in England to calculate the price of lives lost due to deaths from other causes including war. He held that labour was the "father of wealth" and that a measure of its value should be taken into account when estimating national wealth. Petty argued that a country's wealth was influenced by a variety of variables besides its geography and population.

The physiocracy idea, which held that agricultural products should be highly valued and that the nation's wealth was primarily derived from the value of land agriculture and land development, was created by a group of enlightened French economists in the 18th century. The physiocrats' emphasis on productive effort as the source of national prosperity was their main contribution. The physiocrats, who created the principle of natural order, saw the economic world as a natural process with its own inherent laws. The capitalised net income technique in comparison to Petty's macroeconomic strategy. He changed the way and he assessed human capital to be

more scientific. He determined the individual's net future income for this reason. A person's lifetime expected income was estimated in order to determine the part that people play in the process of producing future revenue. Following these two strategies, "Ernst Engel" created a completely new strategy in 1883. Based on an individual's growth costs, he calculated their value. Since birth, the cost of production has served as a unit of measurement. (Farr 1853)

Classical Theory of Economic growth

The first traditional economist, Adam smith (1776), was the writer of "An Enquiry into the Nature and Causes of Wealth of Nations" which incorporated human capital. Growth, according to him, was not only included the accumulation of money and technological advancement but also the development of human capital, which was considered essential to the process of economic development. He added the acquired and usable human talents that enhance the wealth of society and the country as a whole to the capital stock of a nation. According to him, "economic progress should make it possible for people to mingle freely with one another without feeling embarrassed to be seen in public."

An explanation of economic growth is provided by Malthus (1766-1834), who portrays the increasing population and production as being pessimistic. From his perspective, the proportions between population growth and the means of subsistence remain the same when the population is geometrically and the means of subsistence are growing arithmetically. As a result, we will face the impending depletion of the earth and a bitter struggle for limited resources, wars, epidemics, hunger, and mass disease, among other problems.

The concept of comparative advantage, which hold that a country should concentrate on developing and endogenizing its resources only in those fields where it is most globally competitive, and trade with other nations to obtain goods that are no longer manufactured domestically, was of particular interest to David Ricardo (1772). David Ricardo uphold the notion of natural market wages and presupposed that the introduction of new technologies results in a decline in the demand for labour, based on particular types of technical breakthroughs. Like Malthus, Ricardo emphasised

the significance of maintaining proportions and highlighted both the capital's poor and stellar performance.

Neo-classical theories of economic growth

The most potent force in the universe, according to Marshall (1890), is knowledge, which enables us to fulfils our needs. He emphasised the importance of investing in children's education and parental support as investments in human capital and opposed the capitalized-net-earnings approach to human capital as being unrealistic because people are not commodities.

The phrase "human capital" was first used by the economist Schultz in 1961. He asserted that investing in people's knowledge and abilities is essential for an economic boom, just as we do when we invest in buildings and machinery. Schultz observed that prosperous economies in western nations invested in health and education. He held that skills are just as important as tools in a factory and that education and training increase people's opportunities. According to his idea, investing in people strengthens economies and improves people's quality of life. On the other hand, one of the other human capital economists Spence (1973) acknowledged education as a market indication for the probable productivity of workers. It also helps in screening the probable workers that are prolific and needs some tiniest training with a very low cost. Mankiw, Romer, and Weil in the year 1992 revised the model acknowledged by Spence. Cobb -Douglas production function was used by the eminent scholars to re-examine the Solow growth model. Neoclassical growth theories focussed upon the long-term economic growth whose assumptions are based entirely on the accumulation of factor inputs such as physical capital and labour. Exogenous factor includes technical progress which contributed significantly to the neo-classical growth theories (Solow (1957) and Cass (1965). To signify the importance of technology eight convergence theorems were proposed. According to Aghion and Howitt (1998) neo-classical theories focussed upon the importance of technological knowledge. According to them if technological knowledge remains in the way of new innovation there will be a sustained positive growth of output per capita in the long run. Weil (2009) defined neo-classical growth

theories in terms of diminishing returns to scale. If this law follows then as capital per worker increases, growth of the economy will become sluggish until the steady state is reached. However, neo-classical theories themselves treated human capital in a narrow fashion. They explained human capital in terms of one-way relationship in which labour is considered as the factor which contributes to production. Technology is considered as an exogenous factor (Seeta Prabhu, 1998)

Innovative Growth Theory of Schumpeter

Joseph Schumpeter (1883–1950) introduced the term innovation and discussed the importance of the entrepreneur to achieve economic development in 1911. It claimed that driving forces (such as the unexpected discovery of new sources of supply) are the major factors the behind the development of a country.

Keynesian and Post-Keynesian (Neo-Keynesian) Theories

John Maynard Keynes, Roy Harrod, Evsey Domar, Joan Robinson, Nicholas Kaldor and J. E. Meade are the major contributors of Keynesian and Neo-Keynesian growth theories. The main factors belonging to this theory are national income, consumption, savings and investments. Keynesian approach considered short term periods and the specific situation of a depressive economy and the long term is approached by his followers. American economist Evsey Domar and the British economist Roy Harrod formulated Post-Keynesian (Neo-Keynesian) theory of economic growth. Domar's theory determines that investment should grow to ensure the growth of revenue. This is dependent on the share of savings in national income and the average efficiency of investments. Theory of the accelerator profound by Harrod, which determines the ratio of investment growth to growth in income. It shows the functional relationship between income, savings, investment and the analysis of expectations of entrepreneurs. The two theories concluded that, in the technical conditions of production, economic growth is determined by the marginal propensity to save and the dynamic equilibrium in the market system is inherently unstable. So that maintaining it at full employment requires active and purposeful actions of the state.

Exogenous Growth Theory of Robert Solow

Robert Solow and Trevor Swan introduced the neoclassical growth hypothesis in 1956.It explains how to achieve consistent pace of economic growth through the interaction of the three forces of labour, capital, and technology. This theory claims that three factors labour, capital, and technology is responsible for economic growth. While an economy has finite resources for both capital and labour, technology's contribution to growth is limitless. It also claims that of varying ratios of labour and capital in the production function leads to short-term equilibrium is the result. The thesis contends that technology development has a significant impact on economic growth, without technology development growth is impossible.

Theory of Endogenous Economic Growth

In the 1980s and 1990s, a new theory of economic growth was created that accounted for both the effects of imperfect competition and changes in profit rate. Paul Romer and Robert Lucas proposed the endogenous nature of technological discoveries in human capital and technological development based on investments. According to Solow's model, the state was unable to have a long-term impact on the growth rate with the use of economic policy instruments (such as changes in taxation and government expenditure). The drawbacks of neoclassical theory are overcome by endogenous growth theory. According to endogenous growth theories, spending money on human development affects how valuable human capital is (Education and Health). Robert Lucas contends that, in contrast to Romer's thesis, people have a choice between engaging in current output and building up their human capital. The amount of time spent on each of these alternate methods was what influenced the rate of economic expansion. The relationship between the mechanics of economic growth and the process of acquiring and accumulating new information, which is manifested in technical breakthroughs, was thus formalised by endogenous growth theories. These theories investigate the causes of the disparities between the growth rates of various nations, the efficacy of various state scientific, technological, and industrial strategies, as well as the effects of trade and integration processes on global economic growth.

The acquisition of knowledge through “Learning by doing” was emphasised by Kenneth J Arrow. Engagement in activities, such as trying to solve a problem, typically sees learning happen, thus it is depicted as a byproduct of experience that occurs. Higher productivity is the result of the learning curve's increased cumulative output. He was adamant that "Learning by Doing" is the only method that can account for how each new input is utilised more efficiently than the previous ones.

The Linear Stages of Growth Models

How the development process was seen as a progression of historical stages in the 1950s and early 1960s was emphasised by Dang and Pheng. Rostow was a proponent of this viewpoint. The traditional society, the prerequisites for take-off, the take-off, the drive to maturity, and the period of high mass consumption, according to him, are the five stages that the shift from under development to development will go through. The crucial phase is take- off, which will allow emerging nations to move from an under developed to a developed condition. It is believed that growing investment rates are required to promote per capita growth. The Harrod-Domar model stressed that investments are the main driver of the economy, similar to Rostow's stages of growth concept.

Structural Change Models

Economists characterised the development process as a structural shift of labour from the agricultural sector to the industrial sector as the main driver of economic expansion during the latter half of the 1960s and the early 1970s. A limitless supply of labour gradually shifts from the agricultural sector to the industrial sector in Lewis' two-sector model of surplus labour. The Lewis model saw savings and investments as the main drivers of economic progress, much like the Harrod-Domar model, but in the context of less developed nations. The development pattern was the main emphasis of the structural change models, which proposed that the pattern was recognisable and shared by all nations. According to empirical studies on the process of structural change, each country's pattern of development can vary depending on a unique set of factors, including its resource endowment and size, its

government's policies and objectives, the accessibility of outside capital and technology, and the environment for international trade

Neoclassical Counter-Revolution Models

In 1980s, neoclassical counter-revolution economists used three approaches, viz., the free-market approach, the new political economy approach and the market friendly approach to counter the international dependence model. In contrast with the international dependence model, these approaches mainly argued that underdevelopment is not the result of the predatory activities of the developed countries and the international agencies, but caused by the domestic issues arising from heavy state intervention such as poor resource allocation, government-induced price distortions and corruption

New Growth Theory

It first appeared in 1990 to explain the underwhelming performance of many less developed nations. New growth theorists connected knowledge creation and technological transformation. In contrast to labour and capital, it emphasises that rising returns from the use of knowledge lead to economic progress. According to the theory, lower levels of complementary expenditures in infrastructure, research and development, or human capital (education) considerably reduce the higher rate of returns predicted by the Solow model. In order to impact growth over the long run, policy intervention is also regarded as being important. The new growth models encouraged the involvement of the government and public policies in complementary investments in human capital building and the encouraging of foreign private investments in knowledge-intensive industries like computer software and telecommunications

These theories have highlighted the importance of factors such as capital accumulation, technological progress, human capital development, entrepreneurship, innovation, and institutional frameworks in driving sustained economic growth. They have provided frameworks for analysing the complex interplay between these factors and their impact on the expansion of economies. They provide guidance on

the design of effective policies and interventions that foster innovation, encourage investment, enhance human capital, and create an enabling environment for entrepreneurship. Moreover, theories on economic growth have also shed light on the potential trade-offs between growth and equity. They have prompted discussions on inclusive growth, emphasizing the importance of ensuring that the benefits of economic growth are widely shared and contribute to reducing income inequality and poverty. It is important to recognize that economic growth is a multidimensional and context-specific process. No single theory can fully capture the intricacies of economic development, as different factors and mechanisms may be more relevant in specific contexts. Therefore, a comprehensive understanding of economic growth requires a holistic approach that draws insights from multiple theories and takes into account the unique characteristics of each economy.

2.1.2 Human Development Theory

Capability approach is also known as Human Development Theory, is a modern theory that focuses on the multidimensional aspects of human well-being and development. It emphasizes the expansion of individuals' capabilities and freedoms to live a life they value.

Amartya Sen's Capability Approach: Sen's Capability Approach posits that human development should not be solely measured by economic indicators such as income or GDP. Instead, it emphasizes the importance of expanding individuals' capabilities, which are the substantive freedoms they have to lead lives they value. Sen argues that development should focus on enhancing individuals' freedoms, opportunities, and access to resources and services (Sen 1985).

Martha Nussbaum's Capabilities Approach: Nussbaum's Capabilities Approach builds upon Sen's work and identifies a set of central capabilities that should be fostered in individuals for them to lead a life of dignity and well-being. These capabilities include being able to live a long and healthy life, having access to education, participating in political processes, and enjoying personal and social relationships. Nussbaum argues for the importance of a just society that ensures the enhancement of these capabilities for all individuals (Nussbaum 2000).

Erik Erikson's Psychosocial Development Theory: Erikson's Psychosocial Development Theory focuses on the social and psychological aspects of human development across the lifespan. He proposed a series of psychosocial stages, each associated with a unique developmental task or crisis that individuals must resolve. Erikson highlighted the importance of achieving a sense of identity, forming intimate relationships, and contributing to society for healthy human development (Erikson 1950)

Lawrence Kohlberg's Moral Development Theory: Kohlberg's Moral Development Theory explores the stages of moral reasoning and ethical decision-making in individuals. He proposed six sequential stages of moral development, progressing from a focus on self-interest to a consideration of universal ethical principles. Kohlberg's theory suggests that individuals' moral reasoning evolves through exposure to moral dilemmas and social interactions (Kohlberg 1981).

Sigmund Freud's Psychosexual Development Theory: Freud's Psychosexual Development Theory suggests that human development is driven by unconscious sexual and aggressive urges. According to Freud, individuals progress through distinct psychosexual stages, each characterized by a focus on different erogenous zones. The successful resolution of conflicts at each stage contributes to the development of a healthy personality (Freud 1905).

Jean Piaget's Cognitive Development Theory:

How children actively construct knowledge and develop cognitive structures were focused in Jean Piaget Cognitive Development. He proposed several stages of cognitive development, from sensorimotor and preoperational stages in early childhood to concrete operational and formal operational stages in adolescence. Piaget emphasized the importance of interaction with the environment in shaping cognitive abilities (Piaget 1952).

Lev Vygotsky's Sociocultural Theory: Vygotsky's Sociocultural Theory emphasizes the role of social interactions and cultural context in human development. According to him, learning and development occur through collaboration and guidance from

more knowledgeable individuals within a sociocultural environment. He pointed the importance of language, social interaction, and cultural tools in shaping cognitive development (Vygotsky 1978).

B. F. Skinner's Behaviourism Theory: Skinner's Behaviourism Theory focuses on the influence of environmental factors on human behaviour and development. He proposed that behaviour is shaped through conditioning processes, such as operant conditioning, in which individuals learn through reinforcement and punishment. Role of observable behaviours and their consequences in understanding human development were emphasized by him (Skinner 1953).

In conclusion, individual growth and maturation developed through Human Development Theories. These theories have shed light on the complex interplay between biological, cognitive, social, and environmental influences on human development. Classical theories, such as those proposed by Freud, Piaget, Vygotsky, and Skinner, have each offered unique perspectives on human development. Freud's psychosexual theory emphasized the role of unconscious drives, while Piaget's cognitive theory focused on the construction of knowledge and cognitive structures. Vygotsky highlighted the significance of social interactions and cultural context, and Skinner's behaviourism theory underscored the impact of environmental reinforcement on behaviour. These classical theories have paved the way for subsequent research and the development of more comprehensive and nuanced theories of human development. Modern theories, such as Erik Erikson's psychosocial theory, Lawrence Kohlberg's moral development theory, and Urie Bronfenbrenner's ecological systems theory, have expanded our understanding of human development across the lifespan and the influence of various factors on individuals' growth and well-being. It is important to note that no single theory can fully capture the complexity of human development, as it is a multifaceted and dynamic process. Each theory contributes a piece of the puzzle, and together they provide a broader framework for understanding human development. Continued research in the field of human development is crucial for advancing our knowledge and informing practices and policies that promote optimal development across

individuals and societies. By integrating findings from multiple theories and approaches, researchers can gain a more comprehensive understanding of the intricacies of human development and contribute to the well-being and flourishing of individuals throughout their lives.

2.1.3 Household Expenditure Theory

Household expenditure theory is a framework used to understand and analyse the spending behaviour of households. It seeks to explain how households allocate their limited resources among various goods and services to meet their needs and preferences. This theory takes into account economic, sociological, and psychological factors that influence household spending patterns. At its core, household expenditure theory posits that households make rational decisions about their consumption choices based on their income, prices of goods and services, and their preferences. It assumes that households aim to maximize their utility or satisfaction derived from consuming different goods and services within the constraints of their budget. One of the foundational theories in this area is the theory of consumer behaviour, which explores how individuals make choices about what to consume. The theory emphasizes that consumers consider the marginal utility, or the additional satisfaction gained, when deciding how much of a particular good or service to consume. Another influential theory is the life-cycle hypothesis, which suggests that households plan their consumption and saving behaviour over their entire lifespan. This theory argues that households adjust their spending patterns based on their stage in life, such as saving for retirement or major life events, and their expectations about future income and expenses. Additionally, behavioural economics has contributed to the understanding of household expenditure. This field incorporates insights from psychology and recognizes that individuals may not always behave rationally. Behavioural economists study factors such as biases, social norms, and heuristics that influence household spending decisions.

There are several household expenditure theories that have been developed to understand and explain how households make consumption decisions. These theories provide insights into the factors that influence household spending patterns

and offer frameworks for analysing household behaviour. Here are some prominent household expenditure theories:

Traditional Economic Theory: Households make rational decisions to maximize their utility according to traditional theory. It assumes that households have complete information, make decisions based on their preferences and budget constraints, and aim to allocate their resources optimally among different goods and services.

Engel's Law: Engel's law, proposed by Ernst Engel in the 19th century, states that as household income increases, the proportion of income spent on food decreases, while the proportion spent on other goods and services, such as housing, education, and healthcare, increases. According to this law households become wealthier; their consumption patterns shift towards non-food items.

Life-Cycle Hypothesis: Franco Modigliani, introduced Life-Cycle Hypothesis, which suggests that households plan their consumption and saving behaviour over their lifetime. According to this theory, households aim to smooth their consumption over time, adjusting their spending and saving patterns based on their life stage, expected future income, and anticipated needs.

Behavioural Economics: In Behavioural Economics from the insights of psychology it recognizes that households may not always behave rationally in their consumption decisions. This theory explores the influence of cognitive biases, social norms, and heuristics on household spending patterns. It highlights that factors like loss aversion, social comparison, and framing effects can impact household expenditure choices.

Income-Consumption Relationship: In this theory the relationship between household income and consumption levels were mainly highlighted. It explores how changes in income affect household spending patterns. Some variants of this theory suggest that households may have different marginal propensities to consume based on their income level, leading to variations in expenditure patterns across income groups.

Social and Cultural Factors:

Influence of social and cultural factors on spending behaviour would recognize here under Household expenditure theory. These theories emphasize that households' consumption choices are shaped by social norms, peer influences, cultural practices, and societal expectations.

It is important to note that these theories provide different perspectives on household expenditure behaviour, and they are not mutually exclusive. They offer complementary insights into the complex nature of household consumption decisions, considering economic, psychological, and sociological factors. Researchers continue to refine and expand these theories to better understand the dynamics of household expenditure in various contexts.

2.1.4 The Relationship between Expenditure Patterns and Human Development

Expenditure patterns can have a significant impact on human development outcomes. The well-being and capabilities of individuals within a society mainly influenced by the allocation of resources in areas such as education, healthcare, social welfare and infrastructure.

Education Expenditure: Investment in education is crucial for human development as it enhances knowledge, skills, and capabilities of individuals, leading to improved productivity and economic growth. Studies have shown a positive correlation between education expenditure and human development indicators such as literacy rates, school enrolment, and overall educational attainment (Psacharopoulos & Patrinos, 2018).

Healthcare Expenditure: Healthcare expenditure plays a vital role in improving health outcomes and reducing mortality rates, thereby contributing to human development. Countries that allocate higher levels of public spending to healthcare tend to have better health indicators, including lower infant mortality rates, higher life expectancy, and improved access to healthcare services (World Health Organization, 2021).

Social Welfare Expenditure: Spending on social welfare programs, such as social protection, poverty alleviation, and unemployment benefits, can have a significant impact on human development by reducing income inequality and enhancing social cohesion. Research has demonstrated that countries with higher social welfare expenditure generally exhibit better social outcomes, including reduced poverty rates and improved living conditions (OECD, 2020).

Infrastructure Expenditure: Investment in infrastructure, including transportation, energy, water supply and communication networks, is crucial for economic development and human well-being. Adequate infrastructure spending contributes to improved access to basic services, enhances productivity, and promotes overall human development (Estache & Fay, 2010).

In conclusion, studying the relationship between expenditure patterns and human development requires a multidimensional perspective that goes beyond economic factors. The theories discussed, such as the Human Development Index, Capability Approach, Social Expenditure Theory, Engel's Law, and Behavioural Economics, provide valuable frameworks for understanding this relationship. These theories emphasize that human development cannot be solely measured by income or economic growth. Instead, they highlight the importance of investing in healthcare, education, social welfare, and individual capabilities. They recognize that government policies and social expenditures play a crucial role in promoting human development and reducing inequalities. Furthermore, the theories acknowledge the complex nature of individual decision-making, considering psychological and behavioural factors that influence expenditure patterns. Understanding cognitive biases, social norms, and contextual factors can help to explain how individuals allocate resources and prioritize different aspects of human development in their spending decisions.

2.1.5 Determinants of Household Expenditure Patterns

The household expenditure patterns are influenced by a variety of factors that shape individuals' spending decisions. While the specific determinants may vary across households and contexts.

How household mortgage prepayments affect their expenditure patterns, suggested by Agarwal and Chomsisengphet (2019). It finds that households with higher levels of mortgage prepayments tend to reduce spending on durable goods, such as furniture and appliances, while increasing spending on non-durables, such as groceries and healthcare. Attanasio and Weber (1995) examines the determinants of consumption growth and intertemporal optimization using data from the U.S. Consumer Expenditure Survey. It finds that household income, wealth, and demographic characteristics, such as age and family size, significantly influence expenditure patterns. Whereas Browning and Crossley (2009) provide an overview of the life-cycle model of consumption and saving, which explains how individuals allocate their expenditures over their lifetime. It discusses the role of income, assets, and demographic factors in shaping household expenditure patterns. Similarly, study conducted by Deaton and Paxson (1998) explores how household size and economies of scale influence food expenditure patterns. It finds that larger households spend less per capita on food, suggesting that economies of scale play a role in determining household expenditure patterns.

There are several major theories that help to explain the determinants of household expenditure patterns. Here we discussed three prominent theories

- Life-Cycle Theory: Individuals' life stages and income trajectories over their lifetime are the major factors influencing household expenditure patterns under this theory. Households adjust their consumption and savings behaviour based on their expectations of future income and their desire to maintain a stable standard of living throughout their lives. As individuals' age and move through different life stages (e.g., starting a family, nearing retirement), their expenditure patterns change accordingly (Browning & Lusardi 1996).

- Permanent Income Hypothesis: The permanent income hypothesis suggests that households base their consumption decisions on their permanent or long-term income rather than their current income. According to this theory, individuals smooth their consumption over time by using current income to

adjust their savings or borrowing. As a result, changes in temporary income (e.g., due to job loss or windfall gains) have a smaller impact on expenditure patterns than changes in permanent income (Friedman, 1957).

- Keynesian Theory: The Keynesian theory emphasizes the role of current income and short-term economic conditions in influencing household expenditure patterns. According to this theory, households tend to spend a larger proportion of their current income when economic conditions are favourable (e.g., during periods of economic growth or low unemployment). Conversely, during economic downturns or recessions, households may reduce their spending, leading to changes in expenditure patterns (Carrol, 2001).

In conclusion, understanding the determinants of household expenditure patterns is crucial for comprehending consumer behaviour and its implications for various economic and social outcomes. The major theories discussed, including the life-cycle theory, permanent income hypothesis, and Keynesian theory, offer valuable insights into the factors that shape household expenditure patterns. The life-cycle theory highlights how individuals' life stages and income trajectories influence their consumption behaviour over time. It recognizes that households adjust their expenditure patterns based on their expectations of future income and their desire for a stable standard of living throughout their lives. The permanent income hypothesis suggests that households base their consumption decisions on their long-term or permanent income rather than their current income. This theory emphasizes the role of income stability and suggests that households smooth their consumption over time, considering both current income and future income expectations. The Keynesian theory emphasizes the impact of current income and short-term economic conditions on household spending. It recognizes that households tend to spend a larger proportion of their income when economic conditions are favourable and may reduce spending during economic downturns.

These theories provide valuable insights into the determinants of household expenditure patterns, considering factors such as life stages, income expectations, income permanence, and economic conditions.

2.2 Conceptual Framework

The conceptual framework for this thesis aims to explore the relationship between household expenditure patterns and the quality of human development in Malappuram district. It draws upon the theoretical foundations discussed earlier, including the life-cycle theory, permanent income hypothesis, and Keynesian theory, to provide a comprehensive understanding of the determinants and dynamics of household expenditure patterns.

Human Development:

- Definition and dimensions: Human development encompasses multiple dimensions, including education, health, income, gender equality, social inclusion and environmental sustainability.
- Indicators and measurements: Various indicators, such as the Human Development Index (HDI), literacy rates, life expectancy, poverty rates, and income distribution, can be used to assess human development outcomes.

Expenditure Patterns:

- Allocation of household expenditures across different categories, such as education, health, housing, food, and leisure.
- Variation in expenditure patterns based on income levels, socioeconomic status and household demographics.

Determinants of Expenditure Patterns:

- Income levels and stability: The permanent income hypothesis suggests that households consider long-term income when making expenditure decisions.

- Life-cycle considerations: The life-cycle theory highlights how household expenditure patterns change over different life stages and income trajectories.
- Economic conditions: The Keynesian theory emphasizes the impact of current economic conditions on household spending decisions.

Quality of Human Development:

- Education: Expenditure on education as a key determinant of human capital development and long-term well-being.
- Health: Expenditure on healthcare services and access to medical facilities for improved health outcomes.
- Housing: Adequate expenditure on housing infrastructure and living conditions.
- Food security: Expenditure on nutritious and sufficient food for a healthy population.
- Social inclusion: Expenditure patterns that promote social cohesion, gender equality, and reduced inequality.

Interactions and Relationships:

The relationship between household expenditure patterns and key indicators of human development, such as literacy rates, life expectancy, and income levels.

- The role of household income, education, and health expenditures in shaping human development outcomes.
- The influence of socio-economic factors, cultural norms, and government policies on household expenditure patterns and human development.

Determinants of Human Development

Socioeconomic Factors:

- Income and economic resources: Income levels, wealth, and access to economic opportunities influence individuals' capabilities and well-being.
- Education: Access to quality education and lifelong learning opportunities enhance human capital, skills, and knowledge.
- Health and healthcare: good health, access to healthcare services, and adequate nutrition contribute to overall well-being and human development.
- Employment and job opportunities: Decent work, job security, and opportunities for productive employment are crucial for economic empowerment and human development.
- Gender equality: Promoting gender equality and empowering women has a significant impact on human development outcomes.
- Social inclusion and equity: Ensuring equal access to resources, opportunities, and social services for all individuals and marginalized groups.
- Social capital and community engagement: Strong social networks, community participation, and social cohesion contribute to human development.

Environmental Factors:

It includes the Environmental sustainability which resulted Protecting the environment, mitigating climate change, and ensuring sustainable resource management are essential for long-term human development.

Access to basic services:

Adequate access to clean water, sanitation, energy, and infrastructure positively impacts human development outcomes.

Institutional Factors:

- Governance and institutions: good governance, effective institutions, and the rule of law foster an enabling environment for human development.
- Policy interventions: Government policies, social protection measures, and investments in social sectors play a vital role in promoting human development.
- International cooperation: Global partnerships, aid, and cooperation is important for supporting human development efforts in developing countries.

Interactions and Relationships:

The interplay between socioeconomic, social, environmental and institutional factors in shaping human development outcomes. Synergies and trade-offs among different dimensions of human development and policy interventions. The influence of historical, cultural, and contextual factors on the determinants of human development.

2.3 Review of literature

Kerala is known for its high human development indicators and has made significant contribution in education, healthcare, and poverty reduction. However, analysing the expenditure patterns of households within a specific district provides an opportunity to gain insights into the factors influencing human development at a more localized level. This part reviews the existing literature and research conducted in the field of household expenditure patterns and human development. It aims to identify relevant theories, methodologies, and key findings that contribute to the understanding of the topic

The review of literature explores various dimensions related to household expenditure patterns and human development. It encompasses studies on household consumption behaviour, expenditure allocation across different categories, factors influencing expenditure patterns, and the impact of such patterns on human

development outcomes. Furthermore, the review of literature in this chapter highlights specific studies or research works that have examined similar themes in the context of Kerala or other comparable regions. By drawing upon this existing body of knowledge, the thesis aims to build upon previous findings, identify research gaps, and contribute to the understanding of the relationship between household expenditure patterns and the quality of human development in Malappuram district.

The available literature is classified into three themes. Viz.(l) Status of human development (2) Relationship between economic growth and human development (3) Effect of education and health on human development.

2.3.1 Status of Human Development

The status of human development varies across nations and areas, and it is often evaluated using a range of metrics that take into account factors including social inclusion, income, access to healthcare, and gender equality. The goal of human development is to enhance people's capacities and well-being with a particular emphasis on their capacity for leading fulfilling lives. Here are some significant factors pertaining to the stage of human development:

- Education: Access to quality education and attainment levels are crucial indicators of human development. This includes indicators such as literacy rates, enrolment in primary, secondary, and tertiary education, and educational attainment levels of the population.

- Healthcare: Availability and accessibility of healthcare services, along with health outcomes, are important determinants of human development. Indicators such as life expectancy, infant mortality rates, access to healthcare facilities, and disease prevalence are considered in assessing healthcare outcomes.

- Income and Economic Opportunities: Income levels and economic opportunities play a significant role in human development. Measures such

as gross domestic product (GDP) per capita, income inequality, employment rates, and poverty levels are commonly considered to understand the economic dimension of human development.

- Gender Equality: Gender equality is a critical aspect of human development. It encompasses indicators such as gender parity in education, women's representation in decision-making roles, and measures to address gender-based discrimination and violence.

- Social Inclusion: Human development emphasizes social inclusion and reducing inequalities. Indicators related to social inclusion include access to basic amenities, social welfare programs, social protection schemes, and measures to reduce discrimination based on race, ethnicity, or other factors.

To assess the status of human development, comprehensive indices like the Human Development Index (HDI), Gender Development Index (GDI), and Multidimensional Poverty Index (MPI) are often used. The current section reviews the various study conducted by the researchers in different region.

Vyasalu and Vani (1997) analysed human development in Karnataka in 1997 through using Human Development Index (HDI). They concluded by saying that to show improvement in HDI, consistent political support for an overall improvement in each district was needed.

Zaidi and Salam (1998) discovered a significant positive correlation between higher education enrolment and NSDP per capita. Their study linked many indices measuring life expectancy, educational attainment and real GDP per capita with other economic features to ascertain the causes of the differences in these indicators' values among the 15 major Indian states. They discovered a relationship between the fund spend by government on health, nutrition and sanitation and educational achievement, and also it affects with the life expectancy

The National Human Development Report (2001) has tried to map the state of human development in the country. In this report, the HDI is a composite of

variables capturing attainments in three dimensions of human development viz, economic, educational and health. These have been captured by per capita monthly expenditure adjusted for inequality; a combination of literacy rate and intensity of formal education; and a combination of life expectancy at age one and infant mortality rate. The study finds that human development as reflected in the HDI has improved significantly between 1980 and 2001. There has been an improvement both in rural, as well as in urban areas. Though the rural-urban gap in the level of human development continues to be significant, it has declined during the period. At the state level, there are wide disparities in the level of human development. In the early eighties, states like Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa had HDI close to just half that of Kerala. The situation has improved since then. Besides Kerala, among the major states, Punjab, Tamil Nadu, Maharashtra and Haryana have done well on the HDI. In general, HDI is better in smaller states and Union Territories.

Madhav Godbole (2002) addressed the rising interstate gaps and imbalance in the Human Development Report of Maharashtra. It refers the pathetic condition of muslins and tribal Childrens doubted on the accuracy of statistics gathered by government organisation. So, they recommended policies and priorities that focus on the people .it refers of the deplorable conditions of Muslim and tribal children and casts doubt on the accuracy of statistics gathered by government-run organizations. So recommends rearranging policies and priorities as well as creating a development strategy that is focus on people

The Indian government established the HDI, GDI, and HPI in (2002) for the entire country. The data utilized to create the data for the north-eastern states came from Assam, one of the largest states in the area. For the first time, HDR 2003 included a comprehensive section on North East India's human development and dispelled a number of commonly held myths, especially regarding women's status and literacy rates.

Mandal (2003) ranks some major Indian states on the basis of human development through using certain indicators like per capita net state domestic product, life

expectancy at birth, literacy rate and female-male ratio. His study based on sixteen significant Indian states, he got that income growth is not enough for human development.

Costantini and Salvatore (2004) suggested that by including more precise environmental variables into the definition of human development, it can help to establish a numerical indicator of "sustainable human development". To highlight the essential elements of an effective sustainable human development, the study compares a Sustainable Human Development Index with current traditional measures like the Gross Domestic Product and the Human Development Index in order.

Nayak (2005) studied the position and advancement of tribes' development in an underdeveloped region of North-East India. He found that many aspects of human development in these locations are quite poor and significantly behind than that of many other areas of the nation. In the end, this result shows rural-urban and gender imbalance, therefore it is necessary for government act immediately to overcome this situation.

Ghosh. M (2006) who also looks at the relationship between economic growth and human development. Strong evidence of regional convergence in human development can be seen in cross-sectional growth regression estimates, despite significant regional differences in real per capita income. This suggests that poorer states that lagged in terms of per capita income than richer states. Only four states have been in a virtuous cycle based on their performance on human development and economic growth while seven states have been in a vicious cycle. According to the findings, policy should be implemented in a manner that strengthens the human development induced growth process in order to move the states from the category of vicious to virtuous cycles.

Singh and Nauriyat (2006) aim to identify the essential elements of successful state performances in Human Development on the basis of empirical data which was based on fifteen prominent Indian states in 1990s. They draw some policy recommendations as well. The study shows that there was a little completion in

human development among states, and a minor discrepancy in economic growth. It is stated that if a state has better targeted socioeconomic policies, an effective delivery system, effective governance and efficient expenditure, it can achieve a higher level of human development.

Varrtharajan (2006) States have started publishing their own human development report after the first human development report which had been published in 2002. Human development assumes great importance in India, therefore there is healthy competition among the Indian states to raise their respective levels of human development. Policy-makers, academics, professionals, politicians and community organizations had discussed about it. Results show that investing in human development is worth, in addition to increasing and sustaining returns, it also advances human welfare. India made good progress toward human development between 1981 and 2001; her HDI rose by 56% during this time. However, there are significant differences across the states; for example, Bihar would be ranked with Bhutan whereas Kerala would be with China. It might take Bihar another two or three decades to catch up to the advancements made by Kerala in 1980. Nevertheless, states are becoming more similar to one another in 2018, and Tamil Nadu may even surpass Kerala.

Nathan and Mishra (2010) created HDI based on conventional measuring and Euclidean distance measurement. The measures applied to 127 nations between 1990 and 2004. According to the findings, the health condition of the sub-Saharan countries declined due to the HIV epidemics along with the income dimension jerked in the 1990s, lead to the collapse of the Commonwealth of Independent States.

Andreson Tim (2014) revealed that human development must be extensive, liberating, and social process. Individual liberties must be fostered, and through social processes which is dedicated to enhancing human potential and fostering high levels of social involvement. As people become smarter and more conscious of social issues, there is a growing demand for a strong and efficient post-colonial state.

Sarma, A. & Sharma, P. S. (2014) investigated the influence of increased social sector spending in Assam on the crude birth rate (CBR), crude death rate (CDR) and infant mortality rate (IMR). The study focused on social sector spending and human resources link between human development rank and human development indices and the link between social sector spending and health status. For this study, data on the crude birth rate (CBR), crude death rate (CDR), infant mortality rate (IMR), and social sector expenditure in Assam from 2003 to 2008 were used. For the analysis of data regression has been use. Higher amount of social sector expenditure means less amount of CBR and CDR. The more intervention in health sector leads to lesser IMR .

Mittal Prajal (2016) wrote an essay titled "Indian States Social Sector Expenditure and Human Development." His research investigated the impact of social-sector spending on the human development index (HDI) of Indian states. He concluded that both have a positive relation. He emphasised the role of government intervention to alleviating poverty and hardship as well as improving people's well-being. As a result, the government must devote more public funds to these issues. Aside from that, his research suggests that boosting social spending should be one of the top priorities for promoting efficiency in growth and development.

Niken Sulistyowati et al. (2017) Poverty and income per capita have a major impact on the Human Development Index. Income per capita has a beneficial impact on the HDI, despite its very tiny (inelastic) effect, whereas poverty has a negative impact. In the short run, the HDI will rise by 1% for every 10% decrease in poverty. Health, education, and other household expenses are elastic—that is, they have a significant impact on fluctuations in the HDI. The amount that households spend on health care climbed by 35%, education increased by 64%, and other household expenses increased by 36% for every 10% increase in the HDI.

Richardson kojopedeme et.al (2017) Wrote an article about the trend of public spending on human development in Nigerian states. Using 20 years of data from various Nigerian states, this study looked at the distributional influence of public expenditure patterns on human development. They discovered education, health,

agriculture, rural development and water resource expenditure all have a growing impact on human development index while changes in energy and housing costs have a negative impact on human development. Their findings show that public spending has a significant impact on human development across the state. They suggested human development spending be improved and sustained on education, health, and agriculture etc.

Muhammed qasimatteri et al (2018). This study examines the state of education, health, income, and overall human development in several district of the Punjab. They discovered big variations between the districts in terms of human development. They found certain cities like Rawalpindi and Lahore are doing well, while others like Bahawalpur and Rajanpurare are not doing well. For this disparities competition and conflict across region are the sole reason. To improve human development status special consideration and measures are needed.

Saseendran Prasant and Concepcion Maria Martinez Rodriguez (2018) in their article they found that in recent decades, there has been discussion about the Kerala development model. There are health services everywhere, 93% of the state's residents are educated, and there are no slum dwellers. All children under the age of 14 are enrolled in school, and almost all of the households are equipped with electricity. The revolutionary political reforms of the first communist ministry, such as the Land Reform Act, Free Public Education and Free Public Health, made it possible for the state to achieve its current HDI goals. The government conducted a comprehensive literacy campaign in the 1990s with the cooperation of civil society organisations and the Kerala Sasthra Sahithya Parishad, which enabled the state to achieve the highest literacy rate in the country. The ability to advance in both of these realms were made possible for people who had both social capital and financial capital. The state's healthcare system and the government's ongoing, all-encompassing aid are both crucial elements of the Kerala Development Model.

Cordelia Onyinyechi Omedaro(2019) investigated the impact of government spending on human development in Nigeria. According to the research, the government should make more investments in enhancing citizens' knowledge and

skills (developing human potential) to support economic expansion. The entire economy gains from this investment's beneficial outcomes. Omedaro advocated for the government to spend less on necessary expenses and more on initiatives that enhance the lives of citizens. The government should continue to fight corruption in the public sector to ensure that the funds are spent wisely.

Ayushi Singh (2020). The concept of human development has a wider meaning than gross national product and economic growth. The quality of people's lives could not be reflected solely by GNP. In addition, he satisfied that income, education, and health are the key indicators of human development. The main conclusion of his research was that investing in human development is crucial for every nation because its citizens are its greatest resource.

Boban Dasic et al (2020) examined life expectancy, years of education, and income in 189 nations. They discovered significant variances among these countries. Unexpectedly, a country's top scores in one category did not necessarily indicate its level of progress overall. The Human Development Index (HDI), which is an average of these three variables. These nations must continue to advance by abiding by international agreements and norms while putting an emphasis on improving people's lives through education and skill development.

Kuamar Sourav (2020) in his article titled "Status of Human Development in India," draws the conclusion that India has not made enough progress toward the Millennium Development Goals and National Development Goals because a significant portion of the population has not yet been able to benefit from our nation's economic growth. To get benefit human development paradigm must be integrated and deepened in India’s development operation. India must address each of the three dimensions of human development separately, for this purpose firstly, it is unable to imagine a long and healthy life without addressing the hunger problem. India must secondly assure quality and accessibility in terms of knowledge by successfully implementing programmes like Digital India and Skill India. The third is higher standard of living to guarantee a better standard of living, we must first

concentrate on the distribution of income at grass root level and provide better jobs and salary schemes for the poor segment.

Niniek Imaningsih et.al (2020) studied Factors Affecting Human Development Index East Java. They concluded that simultaneously, variable factors like Gini ratio, non-food expenditures and dependency ratios affect life expectancy and the average length of school in East Java with the positive and negative directions. However, individually only the variable expenditure that affects the life expectancy and average length of schooling in East Java

Nitin Mundhe et.al (2020) they used HDI to study socio-economic condition in Maharashtra in the educational field due to the expansion of educational opportunities Maharashtra present mixed picture of educational wealth and poverty. Inter-district disparities can be seen in the Vidarbha and Marathwada regions when compared to Mumbai and Western Maharashtra. In the health, the tribal and rural urban areas gained much attention. The other components of human development index is an improved standard of living. Even though Maharashtra as shown economic success and rapid prosperity, the unequal distribution of growth benefit is one of the dis advantages.

The literature reviewed provides insights into the status of human development in Kerala and India. The findings highlight significant regional disparities in human development within India, with some states exhibiting low levels of human development. Kerala stands out as a state with relatively high human development, particularly in education and healthcare indicators. However, challenges remain including poverty, rural-urban disparities, and gender imbalances. Studies emphasize the importance of comprehensive measurements of human development beyond economic indicators, such as the Human Development Index (HDI). The inclusion of factors like education, healthcare, and urbanization helps capture the multidimensional nature of human development and assess sustainability. The literature also stresses the need for government interventions and increased social sector spending to promote human development. It is suggested that targeted socioeconomic policies, effective governance, and efficient expenditure play

significant roles in improving human development outcomes. Moreover, there is recognition of the significance of environmental variables, qualitative measures, and the role of a strong state in fostering human development. The Kerala development model, which encompasses healthcare, education, social welfare programs, and political reforms, is often highlighted as a successful approach. The reviewed literature also emphasizes the importance of reducing regional disparities, addressing poverty, and improving social welfare through increased public spending on sectors like education, health, and agriculture. The need for equitable income distribution and efforts to enhance the well-being of marginalized communities, such as tribal populations, is emphasized. Overall, the literature highlights the progress made in human development in Kerala and the challenges that persist in various regions of India. The findings underscore the importance of sustained investments in education, healthcare, social welfare, and inclusive policies to ensure comprehensive human development and enhance the well-being of all individuals and communities in Kerala and India as a whole.

Based on the literature review provided, there are several research gaps that emerge in the study of human development in Kerala and India. These gaps suggest areas where further research and investigation are needed. Here are some notable research gaps:

- In-depth analysis of regional disparities: While the literature acknowledges the regional disparities in human development within India, further research can delve deeper into understanding the causes, dynamics, and implications of these disparities. Examining the specific factors that contribute to variations in human development outcomes across different regions can provide valuable insights for targeted policy interventions.

- Environmental sustainability and human development: While some studies have emphasized the inclusion of environmental variables in assessing human development, there is a need for more research on the integration of environmental sustainability considerations into the measurement and promotion of human development. Exploring the relationship between

environmental factors, human well-being, and development can help identify sustainable development pathways.

- Qualitative dimensions of human development: The literature reviewed focuses primarily on quantitative indicators of human development, such as education levels, healthcare access, and income. However, there is a need of research that incorporates qualitative aspects, including subjective well-being, social capital, and cultural dimensions, to provide a more comprehensive understanding of human development.

- Longitudinal studies: Most of the literature reviewed provides cross-sectional analyses, examining the status of human development at a specific point in time. Conducting longitudinal studies that track changes in human development indicators over time can help identify trends, patterns, and the impact of policy interventions on long-term human development outcomes.

- Intersectionality and social inequalities: While some studies touch upon gender disparities and rural-urban divides, further research is needed to explore the intersectionality of various social categories (such as gender, caste, and ethnicity) and their impact on human development outcomes. Investigating how multiple forms of social inequality interact and influence human development can contribute to more inclusive and targeted policy interventions.

- Comparative analysis: The literature reviewed primarily focuses on Kerala and specific Indian states. Conducting comparative analyses between different regions within India or across countries can provide valuable insights into the factors that contribute to different levels of human development and the effectiveness of various policy approaches.

2.3.2 Relationship between Economic Growth and Human Development

The relationship between economic growth and human development is a complex and multidimensional one. While economic growth and human development are

related, they are not synonymous, and their relationship is influenced by various factors. Here are some key studies studied the relationship between economic growth and human development:

Jess Benhabib and Mark. M Spiegel (1994) human capital accumulation is considered one of the important factors for economic development. And, it influences the total productivity of country. They found two results the first is human capital directly influences the domestic production and technical innovation. The second is the human capital stock affects the speed of adoption of technology from abroad.

Markand Jesus (1997) in his article titled by "Human Capital Accumulation and Economic Growth" He examined the real connections between economic development and human capital in various nations. He used the relevant literature to estimate the level and difference specification of the Cobb-Douglas production function as the first stage in his empirical research in both specification of production function human capital contributes positively. Further they also concluded that the degree of wealth positively and significantly influenced the accumulation of human capital.

Ramirez et al. (1998) highlighted the positive relationship between economic growth and human development, with each influencing the other in a reciprocal manner. Public spending on social services and education were identified as important factors in determining this relationship. Further investigation is necessary to identify other factors to support this relationship and vice versa.

Temple. J and Johnson p (1998)

Studied the sample of sample of 64 nations to understand the relationship between accumulation of physical capital and production growth. Through his study he found that the production growth is positively connected with the changes in educational attainment. In general, this result highlights the significance of ideas raised earlier in cross country literature.

Rene veron (2001) in his article "The New Kerala Model: Lessons for Sustainable Development, reveal the Kerala model of development has gained widespread international attention for its achievements in social development and environmental sustainability. However, the model is unsustainable due to the traditional Kerala model has failed to link economic growth to high levels of human development, therefore it is necessary to build a new sustainable model that boost social, productive, and environmental goals at the grass root level. while also attempting to develop synergies between civil society, local governmental organisations, and the state government.

Nissan (2002) was to evaluate the convergence or divergence of human development and economic growth among the sample of 100 countries. He tested the convergence of human development and per-capita income between 1975 and 1998 and founded that there was convergence in human development index and divergence in income. Furthermore, there was an increase over the years in the average HDI for every group of countries. The only group of countries with significant increase in income were the rich countries.

Gustav Ranis (2004) noted that nations place a high priority on human development rather than economic growth as the ultimate goal. both economic growth and human capital are important, they former is used to improving general welfare of the people and latter is used for achieving better quality of human life. According to him, economic growth will be aided by freedom and capabilities.

Ranis and Steward (2005) affirm the significance of the numerous empirical links from economic growth to human development, including investment report. Economic growth, which is crucial to human development, can occur concurrently. Traditional political approaches that claim that advancing human development should be delayed until economic growth allow to its maximum potential.

Conceicao et al. (2009) examine how the present financial crisis has affected human development. The average levels of each of the human development indicators are each higher during episodes of growth acceleration. Based on panel regression, the study concludes that, compared to the underlying trend, 70 indices of human

development related to health are better during phases of growth acceleration and worse during episodes of deceleration.

Muhammad et al. (2009) investigates the causality between economic growth and human resource development in Pakistan. The results of panel rank tests in the study indicate that there exists a long run relationship between human resource development and economic growth in Pakistan.

Reddy (2009) examines the status of human development in India Based on the 2006 UNDP Human Development Report. The Human Development Index of India has increased from 0.515 in 1990 to 0.611 in 2004.The government should take imitative to implement various programmes to bring equal economic growth and human development which leads to gain high productivity.

Daniela & Ciobanu (2014) achieving future economic growth is also a part of human development. People have more options in three crucial areas: the length of life, educational attainment, and access to resources necessary to live comfortably. As per their vision, the idea of economic development is linked to human rights. Human rights are an effort to improve the social structures that support or supply the possibilities and freedoms that members of a community can enjoy.

Elena Pelinescu (2015) attempted to investigate the effect of human capital on economic growth. She emphasised the significance of human capital in achieving economic progress. Her approach revealed a favourable association among per capita, human capital innovation potential, and employee qualification. Apart from that, her model shows the negative impact of both economic crisis and regional disparities on human development.

Afzal et al. (2019) investigates the interrelationships among human development, exports and economic growth in Pakistan in both short run and long run. The results of the Augmented Granger Causality Test show cointegration between economic growth, physical capital, real exports and human development when human development is taken as dependent variables. However, the empirical results of the

study do not support 'export-led growth hypotheses and human capital- based endogenous growth theory in case of Pakistan

Michael Appiah et al. (2019) conducted an empirical analysis of the relationship between human development and economic growth and development in African nations between 1990 and 2015. The main findings indicated that human development has a favourable and considerable influence on economic growth and development in Africa. Human Development Index was used in the study as the primary variable of interest, with GDP being the dependent variable and inflation, capital, investment, and labour serving as the control variables. The study also revealed that, labour and foreign aid have a strong and favourable link with growth.

Dina Ahmad Omar (2020) investigated the connections between human and economic growth in several Arab nations. According to the research, economic growth and the index of human development indicators are directly correlated in most Arab nations, which means that rising the index of human development indicators causes rising the real gross domestic product, and rising real gross domestic product causes rising the index of human development indicators.

Imleda Ortiz medina et al (2021) shows the relationship between variables; economic growth, human development and inequality, based on the principle that increased production does not automatically generate an increase in welfare by itself. Economic growth is crucial because it leads to greater investment, jobs, and income, which in turn leads to higher tax collections (increases in budget income), which are required to fund public spending policies. However, there is no assurance that increased government revenues and economic growth will ultimately result in increased public spending. Consequently, there is no inherent relationship between economic growth (GDP) and human development.

Santhosh Mehrotra and Jajathi K. Parida (2021) made a study regarding the relationship between human development and economic growth in the various States. The study discovered that most provincial states exhibited better levels of human development in combination with faster economic growth. When economic

growth rises, poverty falls as a results health and education improve. This result shows how human development and economic development positively related.

Tanzila Sultana et al. (2022) investigated the relationship between human capital and economic growth; they found out that not in every stage of development affects same results in human capital growth. They found that in developing countries all aspect of human capital positively influences economic growth more in in life expectancy, where as in developed country increased life expectancy position is drag on economic growth because of increase in aging population and dependency ratio

noted that not all stages of development experience the same impact of human capital on growth. Focusing on the qualitative facets of human capital is important for developing nations. Focusing on the qualitative aspects of human capital is important for developed nations. The progress of wealthy nations is hindered by the rise in life expectancy.

While the literature provides valuable insights into the relationship between economic growth and human development, some research gaps is identified:

- Causal mechanisms: While studies have found correlations between economic growth, human capital, and human development, there is a need for more research that identifies the specific causal mechanisms and pathways through which these factors interact and influence each other.

- Contextual factors: The relationship between economic growth and human development is likely to be influenced by various contextual factors, including cultural, social, and political aspects. Further research should explore how these contextual factors shape the relationship and its outcomes.

- Regional and country-specific analyses: Most of the literature focuses on specific countries or regions, and there is a need for more comparative studies that examine the relationship between economic growth and human development across different countries and regions. This would provide a more

comprehensive understanding of the factors that drive or hinder human development in various contexts.

- Sustainable development: While some studies touch upon the importance of sustainable development, there is a need for more research that explicitly examines the relationship between sustainable economic growth and human development, considering environmental factors, resource management, and long-term viability.

- Policy implications: Future research should focus on identifying effective policy interventions and strategies that promote both economic growth and human development simultaneously. This would help policymakers design targeted interventions to foster inclusive growth and improve human development outcomes.

In conclusion, the reviewed literature highlights the interplay between economic growth and human development, emphasizing the significance of human capital, inclusive growth, sustainability, and reducing inequality. However, further research is needed to understand the causal mechanisms, contextual factors, and policy implications in order to promote sustainable and inclusive development that enhances human well-being.

2.3.3 Effect of education and health on human development

Education and health are two critical factors that have a significant impact on human development. It is important to note that education and health are interconnected and mutually reinforcing. Better education can lead to improved health outcomes, and good health facilitates better educational attainment. Together, education and health form a strong foundation for human development, enabling individuals to reach their full potential and contribute to the progress of societies. The following are some literatures related to the effect of education and health on human development.

Mahbub ul Haq (1997) human development is more important than GNP growth, income, wealth, manufacturing goods, and gathering capital. Full scope of human

activity doesn't mean earning money. The nation's true assets are its people. Health, education, resource access, and community involvement help the fundamental human development capabilities.

Neena Malhotra (1999) government spending on education is at a very low level for primary education, means that government spending on education has been decreasing over the years. During the period of 1972 to 1999 government spending on education fell by nearly 9%. She also realised a literacy and larger interstate gaps in educational success.

Amartya Sen (2000) A society's standard of living determined by the desire of the people to live as they wish, then the amount of wealth they possess. Standard of living should view as means of improving qualities like health, education, self-respect, independence, and the capacity to actively engage in community life.

Podrecca and Carmeci (2002) They found that there is no simple relationship between education and subsequent growth. The countries having low education level only have positive affect on subsequent growth as the result of increased human capital investment rights. For developed countries the education level always positive effect on subsequent grow due to high relative income and low technological gap

Anvar, P and Meera Bhai. M (2003) Regional Development in Kerala: A Study of Malappuram District. They concentrated on the differences in economic development among Kerala's several regions. They also investigated the inter-district disparities in Kerala's distribution of plan funding. The study is divided into seven basic categories: a) health care, b) education, c) women's status, d) infrastructure, e) agriculture, f) industry, and g) other indices of development. The study found that Malappuram district is the least developed district in Kerala based on overall development indicators. It is true that there are still significant inequities in the state.

Gupta and Mitra (2004) analyse the potential connections between economic growth, poverty, and health through panel data for the Indian states. The results

show a positive correlation and a two-way relationship between economic growth and health status. Increased productivity boosts growth, and higher growth enables better human capital formation.

Policymakers use health spending as a crucial tool because it helps to predict effect of growth and overall wellbeing of people.

Human Development Report (2005) examined of all sectors of Kerala's economy. According to research by the Centre for Development Study (CDS), scheduled caste and scheduled tribe people are poorer than the rest of the population. This paper emphasizes the importance of long-term strategies in the field of education, which helps to provide opportunity for young individuals from low-income families, to learn new skills. This study indicates that even though Kerala has good rankings in both education and health, it still has certain disadvantages in the area of calorie and low vitamin. This problem leads to health problems for low-income groups

Tilak (2007) investigates based on experience from India the primary education is enough for economic development and prosperity. The study concludes that the prevalent assumption that secondary and higher education have a minor or insignificant role in development is unfounded and that post-elementary education is crucial for economic growth, poverty reduction, and improvements in human development.

Nagar et al (2008) Made a study using data from the Indian economy from 1980–1981 to 2004–2005 to analyse the links between economic development health, and environment. The study concludes that the social infrastructure is more important than the physical infrastructure for environmental sustainability, health, and economic development.

Gusian et.al (2010) published an article titled by "health expenditure, education, government effectiveness and quality of life in Africa and Asia". They discovered a link between health spending, education, and various aspects of human well-being. They discovered that health spending values were quite low In Asiana and Africa

due to the lack of socio-economic development. To recover from this situation international assistance is necessary in the health care of Asia and Africa

Cholakkal Ibrahim (2013) wrote a paper titled "Productive Manpower and its Impact on Poverty in Kerala" in which he discovered that nation's economic and social welfare depends on productive manpower therefore proper education and health are required to achieve productive power. He came to the conclusion that Kerala's population provides the highest per capita GDP. Kerala's optimum population is supported by good health and education. As a result, this optimal population has achieved economic development and has helped to decrease poverty to some extent.

Dastidar and Chatterji (2015) examined the relationship between spending on primary, secondary, and university education and economic growth in India from 1951 to 2011. They found education spending in each sector had been positively affecting economic growth since 1980 as nation transitioned from a state led growth model to pro-business regime through ADF Test (The Augmented Dickey-Fuller), Granger Causality Test, and VAR Model (Vector Autoregressive). The research also encourages the private sector in the field of education, industry and bring about reforms to raise the standard of living.

Hsiao-Yen Liu et. al (2017) examine the relationship between education and health through using Panel Smooth Transition Vector Error Correction Model (PST-VECM). They took 123 samples in nations between 2001 to 2013, the causality is nonlinear and depends on a country's degree of development (as determined by the human development index, or HDI), both in the short and long terms. When he examines the relationship between education and health in short run, they found its relationship is one way and in long run its relationship is two ways.

Rahman and Bassam (2017) studied regarding Human development index of Malappuram district. Malappuram is Kerala's most populous district. During the last two decades, the district had made remarkable progress in the field of education. Malappuram is the district in Kerala that receives the most donations from migrants from other countries. According to UNDP standards, Malappuram district has a

medium level of human development. Malappuram district's HDI is lower than Kerala's, and in order to enhance it, adequate actions in the areas of health, education, and living standards must be done. Encourage income-earning activities by offering more chances to improve per capita income.

Rafeek V.H (2017) examined the human development status of Muslim emigrant households in Malappuram District. This study compares the standard of living, education, and health status of Muslim migrant households to non-migrant Muslim households to examine the impact of emigration and flow of remittances on the well-being, education, and health status of Muslim migrant households. As per the State Human Development Report 2005, Malappuram ranked last position with mean of HDI score of emigrant households (0.3833) is higher than non-migrant households (0.3368). International migration leads to moderate effect on the human development particularly in Muslim households in Malappuram district.

Kumar and Choudhary (2019) have looked at how government spending on education affected India's economic growth from 1951–1952 to 2013–2014. The Augmented Dickey-Fuller (ADF) Test, the Phillips- Perron (PP) Test, and the linear regression method were used in the study they found government expenditure on education has a favourable and considerable impact on economic growth, along with an increase of one unit in government spending on education resulted in an increase of 0.83 units in economic growth.

Dwi Nurvita et al. (2022) The study's conclusions showed that the human development index was significantly and favourably impacted by economic growth, education spending, and health spending in the province of Jambi district. The model used in this study's implications shows that the Jambi provincial government's efforts to allocate education and health spending to support increasing human capital are efficient and optimal to achieve human development index.

Based on the reviews and findings from various studies can draw the following conclusions regarding the effect of education and health on human development:

- Education is a crucial component of human development, as it enhances knowledge, skills, and capabilities, enabling individuals to participate effectively in economic, social, and political activities.
- Access to quality education promotes social inclusion, reduces poverty and inequality, and empowers individuals to make informed decisions and pursue their goals.
- Investment in education, particularly at the primary, secondary, and higher levels, positively impacts economic growth, poverty reduction, and improvements in health outcomes.
- Emphasizing the qualitative aspects of education, such as skills development and critical thinking, is important for both developed and developing nations.
- Good health is essential for human development, as it contributes to overall well-being and enables individuals to lead productive lives.
- Access to healthcare services, nutrition, sanitation, and clean water are key determinants of health and has a significant impact on human development.
- Improved health outcomes, including increased life expectancy and reduced morbidity, positively influence economic productivity, poverty reduction, and educational attainment.
- Addressing health disparities, particularly among marginalized populations, is crucial for achieving equitable human development.

In summary, education and health are integral components of human development, with a strong interconnection between the two. Access to quality education and healthcare services positively influences economic growth, poverty reduction, social inclusion, and overall well-being. Investments in education and health have far-reaching impacts on individual capabilities, societal progress, and sustainable development.

All of the foregoing evaluations relating to human development's literatures, reveal that different components of human development are important, particularly when focusing on education, income, and living standards. In addition, from the perspective of households, efforts have been made to determine the numerous aspects influencing human development. Almost all studies of human development are quantitative in nature, while very few studies are qualitative in nature. However, there is no study made in regard to household expenditure and human development from the standpoint of qualitative in Malappuram district. As a result, the current study is an attempt to fill a research gap by providing a detailed analysis of the relationship between household expenditure patterns and human development in a quality perspective in Malappuram district.

While there is existing literature on the relationship between expenditure patterns of households and human development, there is a research gap specifically related to the expenditure pattern of households and the quality of human development in Malappuram district. The available literature provides insights into the broader concepts of expenditure patterns, human development, and their linkages, but there is a need for more specific research focusing on the context of Malappuram district.

Expenditure Patterns:

There is lack of studies investigating the specific expenditure patterns of households in Malappuram district and how these patterns influence various dimensions of human development.

The composition of household expenditures, including categories such as education, healthcare, nutrition, housing, and other essential needs are to be explored to understand the priorities and allocations made by households in Malappuram district.

The determinants of household expenditure patterns, such as income levels, socioeconomic status, and demographic factors, and their impact on the quality of human development, require further investigation.

Quality of Human Development:

While studies have examined human development indicators at the national and global levels, there is a research gap in assessing the quality of human development specifically in Malappuram district.

The multidimensional aspects of human development, including education, health, income, social inclusion, and empowerment, need to be examined in the context of Malappuram district to understand the overall quality of human development.

The specific challenges and opportunities in the district that affect the quality of human development, such as regional disparities, cultural factors, infrastructure, and governance, require in-depth investigation.

Linkages between Expenditure Patterns and Quality of Human Development:

There is a need to establish a clear link between the expenditure patterns of households in Malappuram district and the quality of human development outcomes.

Examining how different expenditure patterns, such as investment in education, healthcare, and other essential needs, contribute to improvements in human development indicators specific to the district.

Identifying the key determinants and factors that influence household expenditure patterns and their impact on the overall quality of human development in Malappuram district.

Policy Implications:

Research on the expenditure patterns and quality of human development in Malappuram district can provide valuable insights for policymakers and development practitioners to design targeted interventions and policies. Understanding the specific needs and priorities of households in the district can inform the allocation of resources and development strategies to enhance human development outcomes.

CHAPTER III

HUMAN DEVELOPMENT: GLOBAL, NATIONAL AND REGIONAL SCENARIO

CONTENTS

In this chapter, we need to explore the human development status at various levels: global, national and regional. Understanding the current state of human development is crucial for gaining insights into the well-being and progress of societies. By examining human development indicators, we can assess the quality of life, education, health, and other dimensions that contribute to the overall development of individuals and communities. The chapter begins with an overview of human development on a global scale. We examine key international reports and indices that provide a comprehensive assessment of human development across countries. By analysing trends, patterns, and disparities, we gain a broader understanding of the global landscape and the challenges faced in achieving sustainable human development. Moving closer to home, we shift our focus to the national level, specifically India. As a diverse and rapidly developing country, India's human development trajectory offers valuable insights into the complexities and nuances of fostering human well-being within a complex socio-economic context. We examine national-level data, reports, and indicators to assess India's progress in the areas such as education, healthcare, poverty alleviation and gender equality. Further narrowing our scope, we zoom in on the regional perspective, specifically the state of Kerala. Known for its unique development model and emphasis on social welfare, Kerala has garnered attention for its achievements in human development indicators. We explore the specific initiatives, policies, and factors that have contributed to Kerala's notable progress, as well as any challenges that persist in achieving holistic human development. By examining human development status at various levels, this chapter aims to provide a comprehensive and contextual understanding of the dynamics, trends, and challenges surrounding human development. It serves as a foundation for the subsequent chapters, which delve deeper into the specific research focus of analysing the expenditure patterns of households and their implications for human development in Malappuram District.

3.1 History of Human Development

Development has long been regarded as a solution to various socio-economic issues faced by societies, with nations adopting this concept for past century. The roots of

economic development can be traced back to ancient Greek philosophers such as Aristotle and Plato. Aristotle cautioned against evaluating societies solely based on material possessions like income and wealth, as they are sought not for their own sake but as a means to other ends. He argued that wealth is merely instrumental and pursued for the sake of something else. On the other hand, Plato is recognized as the intellectual progenitor of political and economic collectivism, as well as the totalitarian state. For him, the idea of economic development focuses around the benefits of division of labour and its welfare implications. Even in his philosophical writings, the fundamental premise of human development was evident. While Kautilya's Arthashastra primarily focused on governance principles, it too revolved around the welfare and development of the masses. Early economists like Adam Smith, David Ricardo, Robert Malthus, Karl Marx, and J.S. Mill also emphasized the role of human capital in achieving economic development.

After World War II, the concept of development became the central topic of debate in the field of social science. Many countries-initiated efforts to rebuild their economies, which had been damaged by the war. The removal of distortions caused by colonial rule in Asia, Africa and Latin America led to the emergence of various development theories. These theories primarily focused on the quantitative aspect of material well-being and control over resources. As a result, the Gross National Product (GNP) or similar indicators were commonly used to assess the overall welfare of a community. However, by the early 1960s, there was growing dissatisfaction with using GDP as a measure of economic development, as economic growth alone failed to indicate progress in many Third World countries. In the 1970s and 1980s, the development debates shifted towards the idea of redistribution with growth and meeting people's essential basic needs, rather than solely focusing on economic growth. The trickle-down theory faced severe criticism for its failure to effectively address poverty. It was in this context that Mahbub ul Haq suggested that if growth is taken care of, it will alleviate poverty. These ideas laid the groundwork for the human development approach, which prioritizes improving the quality of human life rather than just the quantity of economic output.

In the 1970s, equity considerations became integral to the concept of development. Approaches such as the basic needs approach redirected attention to the requirements of the poor and disadvantaged within societies. The World Bank also broadened its understanding of development and began emphasizing growth that specifically targeted the poor and resource-deficient groups, in addition to overall economic growth. While these development conceptions aimed to enhance the living conditions and well-being of all members of society, the primary indicators still revolved around income measurements in various forms. Consequently, the main objective of national development plans and international development agencies remained achieving growth in real incomes. In the early 1980s, a group of influential economists including Amartya Sen, Paul Streeten, and Mahbub ul Haq challenged the prevailing approach to development. They argued that increased income should be seen as a means to improve human well-being, rather than an end in itself. According to their viewpoint, income should be considered to enhance human choices and capabilities, encompassing the range of possibilities that individuals can pursue or achieve. This shift in perspective placed people at the centre of development, focusing on their well-being, needs, choices and aspirations. This alternative approach became known as the human development approach.

In this new understanding, human development is seen as a process of building human capabilities. These capabilities include leading a long and healthy life, having access to education and knowledge, opportunities for livelihood, access to natural resources for a decent standard of living, sustainable development, personal and social security, participation in the community, responsible government, and good governance, and achieving equality and enjoyment of human rights, among other factors. Traditionally, development theorists argued that an increase in income would lead to improved human welfare. However, proponents of the human development approach disputed this claim. They emphasized that the quality and distribution of economic growth are equally important as the quantity of growth in terms of expanding human choices. Unequal income distribution within a society can result in limited choices for those with limited or no access to income. The availability of choices depends on a society's or rulers' national priorities, the model of development (elitist or egalitarian), the political system (authoritarianism or democracy), the economic approach (command economy or participatory

development), and other factors. These economists demonstrated, by comparing per capita income with indicators of education and health standards, that countries with higher per capita income did not necessarily have better education or health outcomes.

The human development approach gained traction when the United Nations Development Programme (UNDP) presented a comprehensive concept of human development in its first Human Development Report (HDR) in 1990, which was prepared under the guidance of Mahbub ul Haq. Haq defined human development as a process of expanding people's choices by enhancing their capabilities and functioning. Subsequent HDRs have further developed the paradigms of human development, incorporating equity, efficiency and productivity, participation, empowerment, and sustainability.

The primary objective of the 1996 Human Development Report was to establish an enabling environment in which people can lead long, healthy, and fulfilling lives. While there are multiple dimensions to this objective, the crucial aspect is placing people at the centre of all development endeavours and providing them with a range of options. These options include access to income, longevity, knowledge, political freedom, personal security, community participation and the guarantee of human rights. These elements are not seen as ends in themselves, but rather as means to achieve the goal of human welfare. The persistent failure to address fundamental issues such as hunger, poverty, malnutrition, and inequality, even after decades of development efforts, has led to a shift in thinking towards a more human-centric approach to development, departing from a capital-oriented approach. Mahbubul Haq and Amartya Sen presented an alternative perspective on development. Amartya Sen, a prominent scholar on human welfare and development, defined development as the expansion of people's capabilities to lead lives they value. Sen identified five crucial factors that are often overlooked when the focus is solely on income and resources rather than capabilities:

- Personal heterogeneities: Different nourishment requirements exist among pregnant women, children and the elderly.

- Environmental diversities: The requirements for pensioners in Scotland and Sicily during winter differ due to varying climates.
- Variations in social climate: The income needs of parents differ in countries with high-quality public health and education systems compared to those with limited or low-quality facilities.
- Differences in relational perspectives: Income requirements for conforming to social customs and habits can vary.
- Distribution within the family: Family income that is used for alcohol consumption instead of feeding children and supporting their education.

Drawing on these ideas, Mahbub ul Haq introduced the concept of human development in the first Human Development Report in 1990. The complete development process is deemed fascinating only when all dimensions are comprehensively addressed in order to enhance human capabilities.

3.1.1 Human Development as a Means Towards Development

Economic development is often seen as the ultimate objective of various endeavours. However, it encompasses more than just an increase in people's income. It involves the expansion of people's capabilities. Development is a multidimensional process that involves the reorientation and reorganization of the entire economic and social system. It entails not only growth in income and output but also changes in economic, social and cultural attitudes. The concept of development has been a subject of ongoing debate. It is not solely about the accumulation of physical resources but also about the growth of human resources. In the 1970s, the concept of development was redefined to include the reduction of poverty, inequality and unemployment within a growing economy. According to this perspective, the primary objective of any economy should be to identify and address the various challenges that hinder growth, while focusing on policy-oriented solutions.

Development is the ultimate objective for every economy, aiming to provide its people with a long and healthy life and the freedom to make choices. Both quality and quantity aspects are encompassed within the concept of development. Quantity growth pertains to investment in productive infrastructure, while quality growth involves investment in human resources. The significance of growth in development has been discussed previously.

The concept of human development is not new. The inclusion of social values for the betterment of humanity can be traced back to Aristotle, who emphasized that social arrangements should serve human welfare rather than mere wealth accumulation. Immanuel Kant further emphasized that human beings are the true end of all human activities, suggesting that all endeavours should prioritize human welfare rather than the possession of wealth. Adam Smith also argued that investment in human development allows individuals to have a respected place in society, beyond merely possessing wealth. Subsequent studies explored the socio-economic and cultural values associated with human development.

A simple definition of human development provided by Morris and Alpin (1982) describe it as the process of enhancing people's capabilities and improving their quality of life. However, the operationalization of this concept is credited to Mahbub ul Haq, who recognized the significance of human needs and their role in shaping development policies. Human development is a comprehensive framework that centres on the main objective of enhancing people's capacities and expanding their needs and choices. It encompasses economic, political, social, and cultural aspects of life. Additionally, it emphasizes the needs of the poor and ensures freedom of human rights and choices. Evidence from the past indicates that development is a multidimensional process that includes both quantity and quality growth. Thus, economic growth cannot be disregarded. Income and its growth play a crucial role in achieving human well-being. The literature also demonstrates that both concepts are interconnected. Human development without economic growth is deemed meaningless, and growth without development is considered fruitless. Therefore, a strong linkage exists between these two components.

In today's era of globalization and technological advancements, economies are constantly searching for strategies to retain their competitive edge. This competitive advantage is heavily reliant on individuals and the extent to which they can exercise their freedom. The true wealth of a nation lies in its people. The primary goal of every economy is to ensure that its people have long and healthy lives with a decent standard of living. Policies are formulated with this objective in mind. Now, the crucial question arises: What should be the primary focus of an economy? Should it prioritize investment in productive infrastructure or in human resources?

The term "development" was not commonly used in economic literature before the 20th century. Policy makers primarily focused on achieving economic growth, and early development theories cantered on attaining sustained economic growth, as evident in the works of Harrod (1939, 1948) and Domar (1946). This period emphasized the growth of economies in terms of the material output of goods and services, with Gross National Income being considered the primary measure of welfare. Economists believed that growth would have a trickle-down effect, leading to long-term development.

However, in the 1970s and 1980s, European economies experienced significant destruction in terms of productive infrastructure due to wars during that period. It became evident that despite increasing income, unemployment was also on the rise. This experience highlighted that economic growth could occur alongside social issues such as income inequality, poverty and unemployment. Economies realized that they were facing the challenge of development; they were growing quantitatively but lacking in quality. The concept of trickle-down growth was questioned during this time, prompting economies to reconsider their approach to development (HDR 1990).

The destruction experienced during that time led to the emergence of a new paradigm that prioritized the quality and welfare of people as a whole. This paradigm shifted the focus from economic growth as an end goal of development to considering it as a means to achieve development. The concept of human development, which emphasized the quality aspect of development, gained

prominence. The United Nations Development Programme (UNDP) brought this concept into the spotlight with its first report in 1990. The report emphasized the importance of choices and freedom, shifting the focus from income alone. It presented a comprehensive framework for achieving genuine development.

Subsequent reports, such as the National Human Development Report in 2001, recognized development as a process that impacts the quality of life and human well-being. This process encompasses both economic growth and human development. Long-term development requires a mutually reinforcing relationship between these two concepts. While human development is considered a necessary condition for development, it is not sufficient on its own. The literature suggests that both human development and economic growth play crucial roles. Therefore, the concept of growth cannot be disregarded. As a result, the connection between human development and economic growth has gained increasing importance over time.

There are two significant strands that explore the link between Human Development and Economic Growth:

1. The first strand is the Washington Consensus neo-liberal approach, which considers economic growth as a prerequisite for human development. According to this perspective, human development can be pursued once economies have accumulated sufficient productive resources. In this approach, well-being is defined in terms of maximizing utility

2. The second strand is represented by the Gustav Ranis view, which emphasizes the importance of a strong link between human development and economic growth. According to this perspective, when there is a robust connection between human development and economic growth, economies can achieve development more rapidly compared to situations where there is an imbalance between economic growth and human development.

In summary, these two strands offer different perspectives on the relationship between human development and economic growth, with the Washington Consensus approach highlighting the primacy of economic growth and the Gustav Ranis view

emphasizing the significance of a strong link between the two for achieving development.

The two strands, namely the Washington Consensus neo-liberal approach and the Gustav Ranis view, hold significant importance in understanding the link mechanisms between Human Development and Economic Growth. Adam Smith, in his capability approach, emphasized the importance of freedom of choice for individuals. Their needs and choices are fundamental in the development of any economy. The concept of Human capital provides a comprehensive framework for understanding the needs and choices of people.

3.2 Human Development on Global Context

The trend of the Human Development Index (HDI) globally has shown improvement over the years, indicating progress in human development on a global scale. The HDI is a composite index that measures the average achievements in key dimensions of human development, including life expectancy, education attainment and income levels. While specific rankings and values may vary from year to year, the overall trend has been positive. The global HDI has been increasing, reflecting advancements in various aspects of human development across countries.

Many countries have witnessed improvements in life expectancy, access to education, and income levels, leading to an overall increase in their HDI scores. However, it is important to note that there are variations and disparities between different regions and countries. Some regions, such as Europe and North America, generally have higher HDI scores, indicating higher levels of human development. Other regions, particularly parts of sub-Saharan Africa and South Asia, face greater challenges and lower HDI scores.

Addressing these disparities and promoting inclusive development remains a key priority. Efforts to reduce poverty, improve access to quality education and healthcare, promote gender equality, and foster sustainable development are crucial for further advancing human development worldwide. The United Nations Development Programme (UNDP) regularly publishes the Human Development Report, which provides updates and analysis on global human development trends.

These reports offer a comprehensive overview of the current state of human development, policies and interventions to foster progress.

The COVID-19 pandemic has had a significant impact on various aspects of human development and can affect the Human Development Index (HDI) of countries in several ways. It is important to note that the specific impact can vary across countries based on factors such as healthcare systems, socioeconomic conditions, policy responses, and the duration and severity of the pandemic. Here are some ways in which the pandemic may affect the HDI:

1. Health and well-being: The pandemic has caused a significant loss of life and illness worldwide, impacting life expectancy and health outcomes. Countries with high COVID-19 mortality rates may experience a decline in life expectancy, which can impact their HDI.

2. Education: School closures and disruptions to education systems have affected millions of students globally. Learning loss, reduced access to quality education, and disparities in remote learning capabilities can hinder educational attainment, which are a crucial component of the HDI.

3. Income and employment: The pandemic has led to widespread job losses, income reduction and economic slowdown in many countries. This can result in increased poverty, inequality and reduced access to basic needs, impacting income levels and the standard of living, both of which are components of the HDI.

4. Gender equality: The pandemic has exacerbated existing gender inequalities and disproportionately affected women and girls. Increased caregiving responsibilities, higher rates of domestic violence, and reduced access to healthcare services can hinder progress in gender equality indicators, influencing the HDI.

5. Social protection and resilience: The pandemic has highlighted the importance of social protection systems in mitigating the impact of crises. Countries with robust social safety nets and effective measures to support vulnerable populations may be better equipped to mitigate the negative effects on human development.

Table 3.1
Human Development Index (HDI): World Context

Country with high HDI		1990	2000	2010	2015	2018	2019	2020	2021
1	Switzerland	0.851	0.887	0.942	0.954	0.959	0.962	0.956	0.962
2	Norway	0.838	0.913	0.941	0.953	0.962	0.961	0.959	0.961
3	Iceland	0.811	0.871	0.902	0.945	0.959	0.960	0.957	0.959
4	China	0.788	0.851	0.907	0.935	0.949	0.952	0.949	0.952
5	Australia	0.865	0.896	0.923	0.933	0.941	0.941	0.947	0.951
Country with Medium HDI									
116	Philippines	0.598	0.633	0.674	0.698	0.710	0.718	0.710	0.699
117	Botswana	0.586	0.585	0.660	0.702	0.716	0.717	0.713	0.693
118	Bolivia	0.550	0.632	0.662	0.690	0.714	0.717	0.694	0.692
119	Kyrgyzstan	0.638	0.621	0.664	0.690	0.698	0.698	0.689	0.692
132	India	0.434	0.491	0.575	0.629	0.645	0.645	0.642	0.633
Country with low HDI									
160	Tanzania	0.371	0.398	0.493	0.520	0.538	0.548	0.548	0.549
161	Pakistan	0.400	0.441	0.505	0.534	0.545	0.546	0.543	0.544
162	Togo	0.410	0.446	0.477	0.514	0.528	0.535	0.535	0.539
163	Haiti	0.429	0.470	0.433	0.529	0.541	0.543	0.540	0.535
164	Nigeria			0.482	0.516	0.531	0.538	0.535	0.535

Source: Human Development Reports (2021-2022)

Table 3.1 presents the Human Development Index (HDI) values for various countries across different years. The HDI is a composite measure that assesses a country's overall level of human development based on factors such as life expectancy, education, and income. The top five countries with high HDI values are Switzerland, Norway, Iceland, China, and Australia. These countries have consistently maintained high levels of human development over the years. These countries demonstrate strong progress in areas such as healthcare, education, and

income, contributing to their high overall human development. Countries with medium HDI values, including the Philippines, Botswana, Bolivia, Kyrgyzstan, and India, indicate a moderate level of human development. These countries have shown improvements in various human development indicators, but there is still room for further development. For example, India, with HDI score of 0.633, has made strides in recent years but continues to face challenges in education and income inequality. On the other end, countries with low HDI values, such as Tanzania, Pakistan, Togo, Haiti, and Nigeria, face significant development challenges. These countries struggle with issues such as poverty, limited access to education and healthcare, and socioeconomic disparities. Efforts are needed to address these challenges and improve human development outcomes in these nations. The figures in the table highlight the changes in HDI values over time for each country. For instance, Switzerland has consistently maintained a high HDI, showing steady progress over the years. China and India have experienced notable growth in their HDI values, indicating advancements in various aspects of human development. However, some countries, such as Nigeria and Haiti, have experienced relatively slower progress or even slight declines in their HDI values.

HDI values presented in the table underscore the importance of focusing on multidimensional approaches to human development. It is crucial to address not only economic factors but also healthcare, education and other social determinants to create sustainable and inclusive development. The insights provided by the HDI values can inform policymakers, researchers and stakeholders in formulating policies and interventions that foster human development and improve the quality of life for individuals and communities worldwide.

3.3 Human Development Index: Indian Context

India made impressive strides between 1990 and 2017, as seen by the rise in its Human Development Index (HDI) value from 0.427 to 0.640, which is an almost 50% improvement. According to the 2018 Human Development Report by the United Nations Development Programme (UNDP), this accomplishment highlights India's achievements in rescuing millions of people from poverty and solidly places

the country in the medium human development category. India's position dropped from 131st to 132nd out of 191 nations and territories in the newly released United Nations Human Development Index (HDI) 2021-22 report. The dip in life expectancy from 69.7 to 67.2 years is what caused India's HDI rating to drop from 0.645 in 2019 to 0.633 in 2021. India falls within the category of human progress, which is moderate. Human development index (HDI) assesses advancements in three key areas: assuring a long and healthy life, gaining access to education, and upholding a respectable level of living. Four factors are included in the calculation: life expectancy at birth, mean years of education, predicted years of education, and gross national income (GNI), which for India is $6,590 per capita. Shoko Noda, the UNDP Resident Representative in India, acknowledged the downward trend in human development around the world but pointed out one advantage: inequality has less of an impact on human development than it did in 2019. Additionally, India is surpassing the rest of the globe in closing the gender gap in human development. This development was made possible at a lower environmental cost thanks to India's efforts in social security, gender-responsive policies, inclusive growth, and renewable energy projects, which guarantee inclusivity and sustainability. In 90% of the countries, HDI values decreased significantly in 2020 or 2021, according to a UN research, undoing progress made towards the Sustainable Development Goals. After five years of advancement, Human Development, which includes a country's health, education, and average income, experienced consecutive falls in 2020 and 2021. This HDI fall was greatly influenced by the global decline in life expectancy, which fell from 72.8 years in 2019 to 71.4 years in 2021. In 2021, some nations experienced economic recovery, but the health crisis worsened, with two-thirds of countries facing additional drops in birth length. Global disparities in human development are made worse by this unequal recovery.

The introduction of economic reforms known as LPG (Liberalization, Privatization, and Globalization) brought significant attention to human development. The Indian economy has made considerable efforts to improve its human development indicators. While India still lags many economies, there are expectations that it will soon join the league of developed nations. Currently ranked 132th in the HDI, India

has witnessed notable improvements in certain states. Kerala stands out for its high level of human development, surpassing that of many developed economies. Despite the positive performance of the Indian economy, there remains a need for effective implementation of public policies. Former prime minister Manmohan Singh, in his 1986 article "Development, Justice, and Modernization," called for the rekindling of the spirit of idealism and a clear vision for the future that characterized India's freedom struggle. Similarly, Pant (1997) noted that while India has made significant progress, it still falls short of achieving its full potential. The Indian economy has accomplished much, yet there is room for further advancement to reach the desired position.

In the past four decades, India's performance had been characterized as a vicious cycle, with a slight tilt towards economic development but an imbalanced reality. During the 1960s and 1970s, India found itself in the weak links quadrant, with both low human development and low economic growth. The situation shifted in the 1980s, with a period of lopsided development from 1980 to 1992. During this time, economic growth accelerated while progress in human development remained sluggish, as stated in the Human Development Report of 1996.States such as Kerala, Tamil Nadu and Himachal Pradesh have achieved high rankings in the Human Development Index (HDI) despite having relatively modest income levels. In contrast, Punjab and Haryana, although having substantially higher incomes, have lower rankings in terms of human development compared to Kerala and Tamil Nadu. Maharashtra, Gujarat and Karnataka, on the other hand, demonstrate differences in their economic and human development. While their income levels are not significantly high, their achievements in terms of human development are considered moderate, as noted in the National Human Development Report of 2002. In the Indian context, Kurien (2000) observed that progressive states are characterized by better demographic and social development, higher per capita incomes, more developed economies, lower poverty rates, increased resource flows, private investments and improved infrastructure facilities.

The well-known debate between Sen and Bhagwati regarding the models of Kerala and Gujarat demonstrates the significance of human development as a crucial aspect of economic development. Both economists held contrasting views on which model should be considered more successful. Bhagwati supported the Gujarat model, which emphasized growth driven by private entrepreneurship and investment. On the other hand, Sen favoured the Kerala model, which prioritized high social spending to promote growth and serve as a role model for other states. Sen argued that Gujarat's model was weak in terms of its social aspects and could not be considered a success. Bhagwati criticized Sen for merely paying lip service to the government's views on economic development. Sen emphasized the importance of investing in social infrastructure, such as health and education, to enhance productivity and drive growth. Bhagwati, on the other hand, focused solely on growth, believing that it would generate enough resources for social sector schemes. In summary, the debate highlights that Sen's approach emphasizes investment in health and education sectors as crucial for stability and progress.

The Human Development Index (HDI) is a comprehensive measure that assesses long-term progress in three key dimensions of human development: living a long and healthy life, having access to knowledge, and achieving a decent standard of living. In the case of India, its HDI value for 2021 stands at 0.633, placing the country in the Medium human development category. This ranking positions India at 132 out of 191 countries and territories. Over the period from 1990 to 2021, India's HDI value has increased from 0.434 to 0.633, representing a significant change of 45.9 percent. During the same period, there have been notable improvements in life expectancy at birth, with an increase of 8.6 years, as well as in mean years of schooling and expected years of schooling, both of which have seen a change of 3.9 years. Additionally, India's Gross National Income (GNI) per capita has experienced a substantial increase of about 268.1 percent between 1990 and 2021.India ranked 132 among 191 countries and territories on the 2021 Human Development Index (HDI). In the 2020 report, India had ranked 131st among 189 countries and territories. The decline in the country’s performance from its previous level was on account of a fall in life expectancy.

Table 3.2
HDI Score of India

Parameter	Score in 2021	Score in 2020
Life expectancy	67.2 years	69.7 years
Expected years of schooling	11.9 years	12.2 years
Mean years of schooling	6.65	6.65
Standard of life measured in terms of Gross National Income ($)	6589.98	6107.494

Source: Human Development Report (2021-2022)

The data presented in Table 3.2 highlights the Human Development Index (HDI) scores for India in 2020 and 2021 across various parameters. The HDI provides a comprehensive measure of human development; encompassing indicators such as life expectancy, education and income. In terms of life expectancy, India witnessed a decline from 69.7 years in 2020 to 67.2 years in 2021. This decline may be attributed to various factors, including the impact of the COVID-19 pandemic and other health-related challenges. It underscores the need for targeted efforts to improve healthcare infrastructure and access to quality healthcare services. Regarding education, the expected years of schooling slightly decreased from 12.2 years in 2020 to 11.9 years in 2021. This parameter reflects the average number of years an individual is expected to spend in formal education. It indicates the need for continued investment in education, ensuring access to quality education for all and promoting lifelong learning opportunities. The mean years of schooling remained constant at 6.65 years in both 2020 and 2021. This parameter measures the average number of years of education received by individuals aged 25 and older. While stability in mean years of schooling suggests a certain level of educational attainment, there is still room for improvement to enhance the quality and relevance of education. The standard of living, as measured by Gross National Income (GNI), increased from 6107.494 in 2020 to 6589.98 in 2021. This indicates a positive trend in income levels, which is crucial for improving the overall well-being of the population. However, income inequality and distribution disparities may persist and require attention to ensure equitable economic growth and development.

Table 3.3

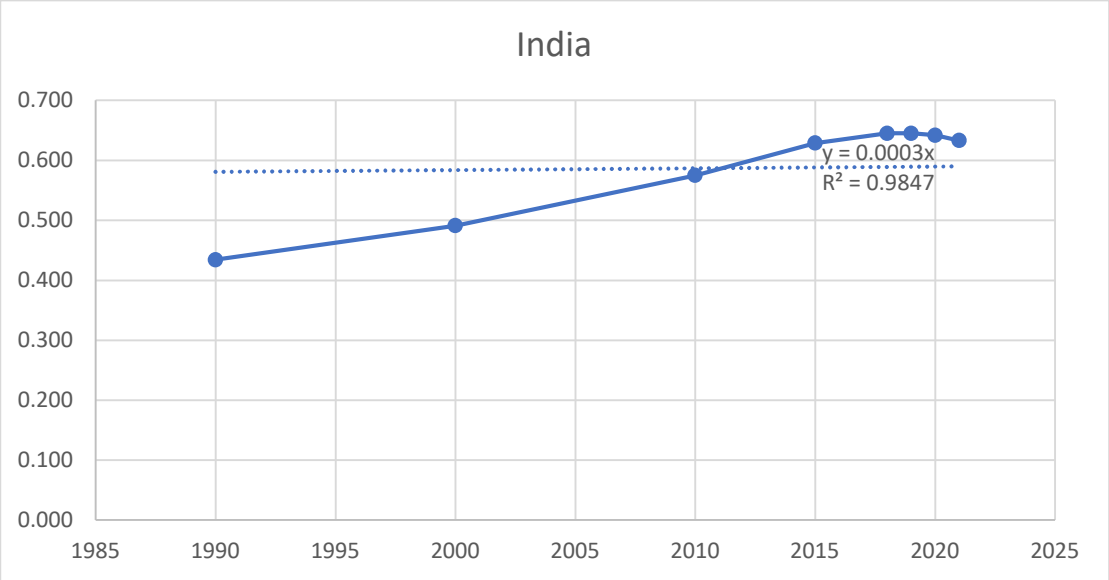
Trends of Human Development Index of India (1990-2021)

Year	India	Growth Rate (Compared to Previous period)
1990	0.434	
2000	0.491	13.13
2010	0.575	17.11
2015	0.629	9.39
2018	0.645	2.54
2019	0.645	0.00
2020	0.642	-0.47
2021	0.633	-1.40

Source: Human Development Report (2021-2022)

Table 3.3 presents the Human Development Index (HDI) of India from 1990 to 2021, along with the growth rate compared to the previous period. The HDI is a composite measure that reflects a country's overall level of human development, encompassing factors such as life expectancy, education and income. In 1990, India had an HDI score of 0.434. Over the subsequent decades, there has been a positive trend in India's HDI, indicating improvements in human development. From 1990 to 2000, there was a growth rate of 13.13%, highlighting significant progress in that period. Between 2000 and 2010, India experienced a growth rate of 17.11%, indicating continued advancement in human development. This period saw notable improvements in key areas such as life expectancy, education and income. From 2010 to 2015, the growth rate slowed down to 9.39%, indicating a slightly reduced pace of progress in human development. However, there was still overall improvement during this period. Between 2015 and 2018, there was a growth rate of 2.54%, suggesting a modest increase in human development. The subsequent years, 2019 and 2020, witnessed minimal changes in the HDI score, with a growth rate close to zero. In 2021, India's HDI score was 0.633, reflecting a decrease compared to the previous year. The negative growth rate of -1.40% indicates a decline in human development during that period.

Figure 3.1 Trends Human Development Index of India (1990-2021)



Source: Human Development Report (2021-2022)

Table 3.4

Average Annual HDI Growth of India

Period	Average Annual HDI Growth	CAGR (1990-2021)
1990-2000	1.24	1.31
2000-2010	1.59	1.70
2010-2021	0.88	0.83
1990-2021	1.22	1.24

Source: Human Development Report (2021-2022)

Table 3.4 presents the average annual Human Development Index (HDI) growth of India during different periods, as well as the Compound Annual Growth Rate (CAGR) for the entire period from 1990 to 2021. The average annual HDI growth provides insights into the pace of progress in India's human development over specific time intervals. From 1990 to 2000, India experienced an average annual HDI growth of 1.24, indicating a positive and steady improvement in human development during that period. The CAGR for this period was 1.31%, which represents the annual growth rate over the entire period from 1990 to 2000.Between 2000 and 2010, India witnessed a higher average annual HDI growth of 1.59,

reflecting a more accelerated progress in human development. The CAGR for this period was 1.70%, indicating a slightly higher annual growth rate compared to the previous period. From 2010 to 2021, the average annual HDI growth decreased to 0.88, suggesting a slower pace of improvement in human development during this period. The CAGR for the entire period from 1990 to 2021 was 1.22%, representing the compounded annual growth rate over the entire time frame. The data in Table 4.4 highlights the varying rates of progress in India's human development over different time intervals. While there was significant growth in human development during the 1990s and 2000s, the pace slowed down in the most recent period from 2010 to 2021. The CAGR provides a comprehensive measure of the overall growth rate in human development throughout the entire period. These findings underscore the need for continued efforts and targeted interventions to sustain and accelerate the progress of human development in India. It is important for policymakers and stakeholders to address the factors contributing to the slower growth in recent years and devise strategies to ensure equitable and inclusive development for all segments of the population.

Table 3.5

Instability of HDI in India from 2018-2021

Average HDI	0.64125
Standard Deviation	0.005679
CV	0.8856
Adj R^2	0.679
CDVI	0.501753

Source: Estimated from Human Development Report (2021-2022)

Table 3.5 provides an analysis of the instability of the Human Development Index (HDI) in India from 2018 to 2021. The table includes the average HDI, standard deviation, coefficient of variation (CV), adjusted R-squared (R^2), and the Cuddy-Della Valle Index (CDVI). The average HDI for the given period is calculated to be 0.64125. This represents the mean value of the HDI, indicating the average level of human development in India during the specified timeframe. The standard deviation is a measure of the dispersion or variability of the HDI values. In this case, the standard deviation is 0.005679, suggesting that the HDI values in India experienced

relatively low variation or instability during the analysed period. The coefficient of variation (CV) is calculated by dividing the standard deviation by the mean HDI. The CV in this table is 0.8856, indicating that the HDI values in India had a moderate level of variation relative to the mean. This suggests a certain degree of fluctuation in the human development levels during the given period. The adjusted R-squared (R^2) is a statistical measure that indicates the goodness of fit of a regression model. In this context, an adjusted R^2 value of 0.679 suggests that the regression model used to analyse the HDI values in India explains approximately 67.9% of the variability in the data. This indicates a reasonably good fit of the model to the observed HDI values. The Cuddy-Della Valle Index (CDVI) measures the instability or volatility of the HDI. The CDVI in this table is calculated to be 0.501753, indicating a moderate level of instability in the HDI values in India during the analysed period. The data suggests that the HDI values in India experienced relatively low variation or instability, there was still a moderate level of fluctuation in the human development levels. These findings highlight the importance of monitoring and understanding the factors that contribute to the instability of the HDI to ensure sustained and consistent progress in human development in India.

Table 3.6

Comparison of HDI of India with Rank 1 Country

Year	Switzerland	Growth Rate	India	Growth Rate	Difference In HDI	Difference In Growth Rate
1990	0.851		0.434		0.417	
2000	0.887	4.230	0.491	13.134	0.396	-8.903
2010	0.942	6.201	0.575	17.108	0.367	-10.907
2015	0.954	1.274	0.629	9.391	0.325	-8.117
2018	0.959	0.524	0.645	2.544	0.314	-2.020
2019	0.962	0.313	0.645	0.000	0.317	0.313
2020	0.956	-0.624	0.642	-0.465	0.314	-0.159
2021	0.962	0.628	0.633	-1.402	0.329	2.029
Current Rank	1		132			

Source: Estimated from Human Development Report (2021-2022)

Table 3.6 presents a comparison of the Human Development Index (HDI) between India and Switzerland, the country ranked 1 in terms of HDI. The table includes the HDI values for both countries, the growth rates of their HDIs, and the differences in HDI values and growth rates between the two countries. In 1990, Switzerland had an HDI of 0.851, while India's HDI was 0.434, resulting in a difference of 0.417. Over the years, both countries experienced growth in their HDIs, but Switzerland consistently maintained a higher HDI than India. The growth rates of the HDIs show the rate at which the countries progressed over time. For example, between 1990 and 2000, Switzerland's HDI grew by 4.230, while India's HDI experienced a growth rate of 13.134. However, despite India's higher growth rate during this period, the difference in HDI between the two countries decreased from 0.417 to 0. 396.The table further demonstrates the HDI values, growth rates, and differences for subsequent years, highlighting the disparity between Switzerland and India. While India's HDI improved over time, the growth rates were not consistently higher than Switzerland's. The differences in HDI between the two countries fluctuated, with India gradually closing the gap but still lagging. The current rank indicates that Switzerland holds the top position in HDI rankings, while India is ranked 132. This emphasizes the substantial difference in human development levels between the two countries. This highlighting the significant disparity in human development levels and growth rates. The data underscores the need for India to continue striving for sustainable and inclusive development to bridge the gap with countries like Switzerland. Among India’s neighbours, Sri Lanka (73rd), China (79th), Bangladesh (129th), and Bhutan (127th) are ranked above India, while Pakistan (161st), Nepal (143rd), and Myanmar (149th) are worse off. The report said around 90 per cent of countries registered a decline in their HDI value in 2020 or in 2021.

3.4 Human Development Index: Kerala’s Context

Kerala, a state in India, is known for its high human development indicators. It has consistently achieved remarkable progress in various aspects of human development, including healthcare, education and overall quality of life. The state's emphasis on social welfare, education, and healthcare has contributed to its high human development outcomes. Kerala has achieved significant improvements in life expectancy, literacy rates, and overall education levels. The state has a strong focus on primary education achieving near-universal literacy rates. It also boasts a high

literacy rate among women, which has been instrumental in empowering women and promoting gender equality. Moreover, Kerala has made considerable strides in healthcare, resulting in high life expectancy and low infant mortality rates. The state's healthcare system provides accessible and quality healthcare services to its population. The socio-economic development policies, focus on social welfare programs, and effective governance have played a crucial role in Kerala's high human development achievements.

Education: Kerala has achieved remarkable progress in education. The state has a high literacy rate, with both male and female literacy rates well above the national average. The focus on education has resulted in a highly educated population with better access to opportunities for personal and professional growth.

Healthcare: Kerala's healthcare system is known for its quality and accessibility. The state has made significant investments in healthcare infrastructure, resulting in better healthcare outcomes for its residents. The availability of healthcare facilities, well-equipped hospitals, and a strong primary healthcare network have contributed to the state's high life expectancy and low infant mortality rates.

Social Development: Kerala has been successful in implementing various social development initiatives. These include programs to address poverty, improve social inclusion, and promote gender equality. The state has implemented schemes to support marginalized communities and provide social security measures for vulnerable groups.

Economic Development: Kerala's economic development has also contributed to its human development achievements. While the state's economy is primarily driven by remittances from overseas migration, there have been efforts to diversify the economy through sectors such as tourism, information technology, and healthcare services.

Sustainable Development Goals (SDGs): Kerala has shown a commitment to achieving the United Nations' Sustainable Development Goals. The state has taken initiatives to address poverty, hunger, education, gender equality, and sustainable development, aligning its policies and actions with the global agenda for sustainable development.

Kerala's high HDI values reflect its strong focus on social welfare, education, healthcare, and sustainable development. The state's achievements in these areas have positively impacted the well-being and quality of life of its residents.

Table 3.7

Human Development Index of Kerala (1990-2019)

Year	HDI	Growth rate
1990	0.550	
1995	0.565	2.73
2000	0.593	4.96
2005	0.675	13.83
2010	0.709	5.04
2015	0.763	7.62
2019	0.766	0.39
CAGR	1.17	

Source: Global Data Lab

Table 3.7 presents the Human Development Index (HDI) values for Kerala since 1990, based on the UN methodology. The HDI is a composite index that takes into account factors such as education, life expectancy, and per capita income to measure human development. According to the data, Kerala's HDI has shown a steady increase over the years. In 1990, the HDI value was 0.550, and by 2019, it had reached 0.766. This represents a compound annual growth rate (CAGR) of 1.17% over the entire period. The growth rates indicate the percentage change in the HDI values compared to the previous period. From 1990 to 1995, the HDI grew by 2.73%. The growth rate increased to 4.96% from 1995 to 2000, indicating a faster pace of development. Between 2000 and 2005, there was a significant growth rate of 13.83%, reflecting substantial improvements in human development indicators. The subsequent periods of 2005-2010, 2010-2015, and 2015-2019 also witnessed growth rates of 5.04%, 7.62%, and 0.39% respectively. It suggests a consistent improvement in human development in Kerala, as reflected by the increasing HDI values. It indicates progress in areas such as education, healthcare, and living standards over the years, contributing to the overall well-being and development of the population.

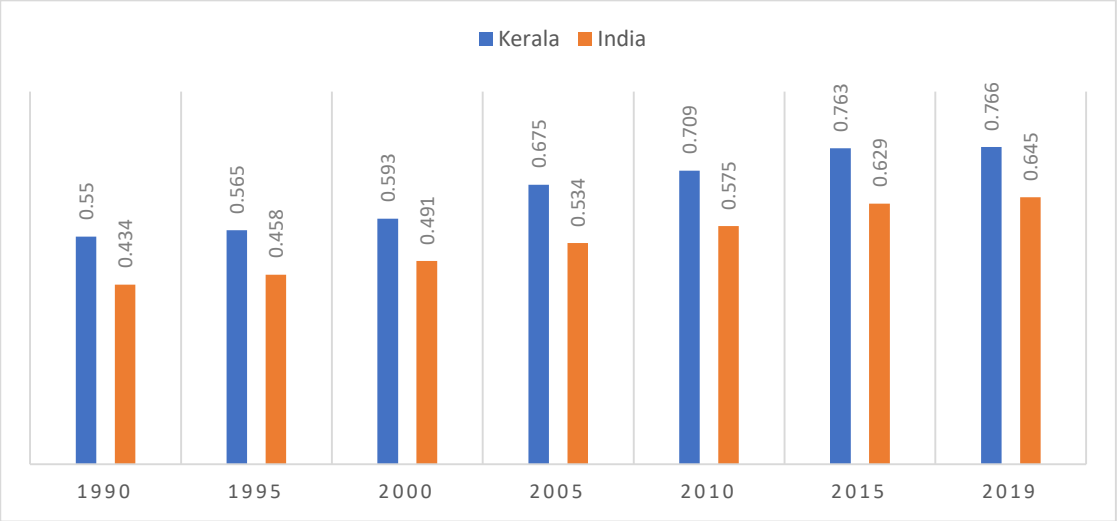
Table 3.8

HDI Comparison of Kerala with India (1990-2019)

Year	Kerala	India	Difference
1990	0.550	0.434	0.116
1995	0.565	0.458	0.107
2000	0.593	0.491	0.102
2005	0.675	0.534	0.141
2010	0.709	0.575	0.134
2015	0.763	0.629	0.134
2019	0.766	0.645	0.121

Source: Global Data Lab

Figure 3.2 HDI Comparison of Kerala with India



Source: Global data lab

Table 3.8 compares the Human Development Index (HDI) values of Kerala with the HDI values of India for various years. The HDI is a measure of human development that takes into account factors such as education, life expectancy, and per capita income. In 1990, Kerala had an HDI value of 0.550, while India had an HDI value of 0.434. This reflects a difference of 0.116 between the two regions. Over the years, Kerala consistently maintained a higher HDI value compared to the national average. In 1995, the difference in HDI between Kerala and India was 0.107, with Kerala's HDI at 0.565 and India's at 0.458. The difference remained relatively stable

in the subsequent years, with Kerala consistently outperforming the national average in terms of human development. By 2019, Kerala's HDI had reached 0.766, while India's HDI was 0.645, resulting in a difference of 0.121. This indicates that Kerala had a higher level of human development compared to the country as a whole. It highlights the relatively higher levels of human development in Kerala compared to the national average. It underscores the region's focus on education, healthcare, and other factors contributing to well-being and quality of life.

Table 3.9

Human Development Indicators of Kerala

Indicators	2021	2010	2000	1990
Subnational HDI	0.752	0.709	0.593	0.55
Health index	0.834	0.857	0.817	0.748
Educational index	0.713	0.626	0.513	0.459
Income index	0.716	0.665	0.498	0.485
Life expectancy	74.23	75.68	73.14	68.63
Life expectancy females	77.32	79.39	76.54	
Life expectancy males	72.35	73.76	72.22	
Expected years schooling	14.2	12.9	10.66	11.25
Expected years schooling girls	14.77	13.03	10.2	
Expected years schooling boys	13.65	12.78	10.99	
Mean years schooling	9.543	8.042	6.508	4.396
Mean years schooling females	10.88	7.677	7.32	
Mean years schooling males	8.82	8.303	7.024	
Log Gross National Income per capita	9.344	9.009	7.903	7.816
Log Gross National Income per capita females	8.215	8.039	7.048	
Log Gross National Income per capita males	9.852	9.485	8.334	

Source: Global Data Lab

Table 3.9 presents various human development indicators for Kerala across different years, showcasing the progress and development in the state. The subnational HDI for Kerala has shown consistent improvement over time. In 2021, the subnational HDI stands at 0.752, reflecting the overall development and well-being in the state. The health index, educational index and income index have also witnessed positive growth, indicating advancements in healthcare, education and economic prosperity.

Life expectancy in Kerala has steadily increased over the years. In 2021, the average life expectancy is 74.23 years, with females having a higher life expectancy of 77.32 years compared to males at 72.35 years. This demonstrates the focus on healthcare and the overall quality of life in the state. Kerala has also made significant progress in terms of education. The expected years of schooling have increased, with 14.2 years expected for the overall population in 2021. There is a notable emphasis on gender equality in education, as the expected years of schooling for girls exceed that of boys. The mean years of schooling have also seen remarkable growth, indicating improved access to quality education. The log Gross National Income (GNI) per capita, a measure of economic well-being, has consistently risen in Kerala. In 2021, the log GNI per capita is 9.344, reflecting the economic progress and standard of living in the state. The human development indicators of Kerala demonstrate the state's commitment to holistic development, encompassing healthcare, education, and economic prosperity. The consistent improvements over time highlight the efforts undertaken to enhance the well-being and quality of life for its residents.

Table 3.10
Districts wise Human Development Index in Kerala

States	HDI	Ranks
Thiruvananthapuram	0.773	9
Kollam	0.787	6
Pathanamthitta	0.795	3
Alappuzha	0.794	4
Kottayam	0.796	2
Idukki	0.754	12
Ernakulam	0.801	1
Thrissur	0.794	5
Palakkad	0.76	10
Malappuram	0.749	14
Kozhikode	0.781	8
Wayanad	0.753	13
Kannur	0.783	7
Kasaragod	0.760	11
Kerala	0.773	

Source: Human Development Report of Kerala-2005

The table 3.10 gives a thorough outline of the districts in Kerala in relation to the Human Development Index (HDI) rankings for the state. With an amazing HDI of 0.801, Ernakulam emerges as the most developed district, taking the top spot. Kottayam, which has a high human development index of 0.796 and holds the second position, is not far behind. With HDI scores of 0.795, 0.794, and 0.794, respectively, Pathanamthitta, Alappuzha, and Thrissur are in third, fourth, and fifth place, respectively. Malappuram ranks 14th with an HDI of 0.749, which indicates somewhat less human development. Like this, Wayanad and Idukki are ranked 13th and 12th, respectively, with HDI ratings of 0.753 and 0.754.

Notably, Thiruvananthapuram, the capital district, ranks nineth with an HDI of 0.773, indicating a solid but not very high degree of development. With varied levels of human development, the districts Kozhikode, Kannur, and Kasaragod earn the eighth, seventh, and eleventh places, respectively. Kerala has a commendable overall HDI of 0.773. This information emphasizes both the successes and gaps in human development across Kerala's districts, highlighting the necessity of concentrating developmental efforts in certain areas to guarantee fair development and an improved standard of living for all citizens.

The chapter on human development provides a comprehensive analysis of global, national, and regional perspectives. The Human Development Index (HDI) has been a key measure used to assess and compare human development across countries and regions. Through the examination of HDI values, growth rates, and various indicators, we gain insights into the progress, achievements, and disparities in human development.

At the global level, we observe that countries with high HDI scores, such as Switzerland, Norway and Iceland, consistently rank among the top performers in terms of life expectancy, education and income. On the other hand, countries with low HDI scores, like Tanzania, Pakistan and Nigeria, face significant challenges in these areas. Turning our focus to India, we find that the country has experienced notable growth in its HDI over the years. However, there are still considerable gaps compared to countries with high HDI scores. India's efforts to improve healthcare,

education, and income indicators are reflected in its positive growth rates, although further progress is needed to bridge the development divide. Within India, Kerala stands out as a state with commendable human development achievements. Kerala's high HDI score coupled with significant advancements in healthcare, education, and income, position it as a leading region in human development. The state's emphasis on quality education and healthcare services is evident in its higher life expectancy and mean years of schooling.

In addition to the key findings presented in the chapter, it is important to recognize the dynamic nature of human development and the challenges that lie ahead. While progress has been made in improving HDI scores and various indicators, there are persistent inequalities and disparities that need to be addressed. The analysis of HDI values and growth rates over time reveals that the pace of progress in human development varies across countries and regions. It is crucial to identify the factors contributing to the success stories of high-performing countries and replicate those strategies in regions with lower HDI scores. Furthermore, the chapter sheds light on the multidimensional nature of human development by examining indicators such as life expectancy, education, and income. These indicators provide insights into the overall well-being and quality of life of individuals. It is essential to consider a holistic approach to development that takes into account not only economic growth but also factors related to health, education, gender equality, and environmental sustainability. The comparison between Kerala and the national average in India demonstrates the potential for regional disparities in human development within the country. Kerala's achievements in healthcare, education, and income indicators serve as an example of effective policies and interventions at the regional level. Such insights can inform policymakers and stakeholders in other regions to adopt similar approaches and prioritize investments in human development. Moving forward, it is important to continue monitoring and evaluating human development progress using reliable indicators and data.

In conclusion, the chapter highlights the significance of human development as a comprehensive and multidimensional concept that goes beyond economic growth. It

emphasizes the need for concerted efforts at the global, national, and regional levels to achieve inclusive and sustainable development for all. By understanding the complexities and nuances of human development, we can work towards creating a more equitable and prosperous future. The chapter highlights the importance of continuously monitoring and addressing disparities in human development both globally and nationally. It underscores the need for policy interventions and targeted efforts to improve the well-being and quality of life for all individuals, particularly in regions and communities with lower HDI scores. So, the chapter provides a comprehensive overview of human development from a global, national, and regional perspective. It underscores the significance of human development as a multidimensional concept and the importance of fostering inclusive and sustainable development to ensure a better future for all.

CHAPTER IV

ASSESSING HUMAN DEVELOPMENT IN MALAPPURAM DISTRICT

CONTENTS

The chapter titled "Assessing Human Development in Malappuram District" delves into a comprehensive evaluation of the human development in the Malappuram district. As an essential component of socio-economic progress, human development encompasses a broad spectrum of factors that contribute to the overall well-being and flourishing of individuals within a society. In this chapter, we embark on a journey to uncover the multifaceted dimensions of human development in Malappuram. By analysing various indicators, statistics and qualitative measures, we aim to provide a comprehensive assessment of the district's progress in enhancing the quality of life for its residents. The primary objective of this chapter is to shed light on the strengths and areas of improvement in human development, enabling policymakers, stakeholders, and communities to make informed decisions and implement targeted interventions for sustainable growth. By unravelling the existing landscape of human development, we strive to uncover valuable insights and opportunities for progress, empowering the district to fulfil its potential and ensure the well-being of its populace. Through the lens of education, healthcare, infrastructure, employment, social equity, and other critical domains, we explore the interplay between various factors that shape the human development landscape in Malappuram. By examining relevant data, and engaging with local perspectives, we aim to provide a comprehensive and nuanced understanding of the district's current state. Furthermore, this chapter seeks to initiate a dialogue on the significance of human development in driving inclusive growth and fostering a society that nurtures the potential of all its members.

The present chapter comprises three sections. The first section aims to outline the socio-economic profile of the respondents. The second section examines the indicators of human development in the Malappuram district. The final section endeavours to gauge the happiness levels of the people in the Malappuram district.

4.1 Socio-Economic Profile of Respondents

Analysing the socio-economic profile of respondents is crucial for gaining a deeper understanding of the context and dynamics influencing human development in Malappuram district. Examining the socio-economic profile allows us to identify

key demographic characteristics such as age, gender, educational attainment, income levels, occupation, and household composition. These factors provide insights into the diverse population within the district and how different groups may experience human development differently. Socio-economic profile serves as a benchmark for monitoring progress over time. By periodically reassessing the profile, we can track changes, identify emerging trends, and evaluate the impact of policies and interventions on various socio-economic indicators. This monitoring and evaluation process ensures that human development initiatives remain effective, responsive, and adaptable to evolving circumstances.

Table 4.1
Social Status of Respondents

Variable		Frequency	Percent
Marital Status	Married	301	78.0
	Separated	7	1.8
	Single	69	17.9
	Widow	9	2.3
Age	Below 18	25	6.5
	18-40	242	62.7
	41-60	108	28.0
	61-80	11	2.8
Religion	Christian	12	3.1
	Hindu	131	33.9
	Muslim	243	63.0
Caste	EWS	1	.3
	General	19	4.9
	OBC	286	74.1
	SC	67	17.4
	ST	13	3.4
Nature of the family	Joint	120	31.1
	Nuclear	266	68.9
Place of residence	Rural	316	81.9
	Semi urban	4	1.0
	Urban	66	17.1
Educational qualification of the head	Illiterate	28	7.3
	Up to SSLC	41	10.6
	SSLC	109	28.2
	Plus two	124	32.1
	Higher education	84	21.8
Total		**386**	**100.0**

Source: Primary Survey, 2023

Table 4.1 presents the social status of the respondents. With respect to marital status, where the majority of respondents (78%) are married, followed by a small percentage who are separated (1.8%), single (17.9%), and widowed (2.3%). Considering the age, with the largest group of respondents falls within the 18-40 age group (62.7%). There are also significant percentages in the 41-60 age group (28%) and the below 18 age group (6.5%), while a smaller proportion falls within the 61-80 age group (2.8%). With regards to religion, it shows that the respondents are predominantly Muslim (63%), followed by Hindu (33.9%) and Christian (3.1%). The variable Caste reveals that the majority of respondents belong to the OBC category (74.1%), followed by SC (17.4%), General (4.9%), ST (3.4%), and a very small proportion in the EWS category (0.3%). When it comes to the nature of the family, the majority of respondents are from nuclear families (68.9%), while a significant portion comes from joint families (31.1%). Regarding the place of residence, the respondents predominantly live in rural areas (81.9%), followed by urban areas (17.1%) and a very small proportion in semi-urban areas (1%).Lastly, the educational qualification of the head of the households indicates that the highest proportion of respondents have completed up to SSLC (28.2%) and plus two (32.1%), followed by higher education (21.8%), SSLC (10.6%), and a smaller percentage who are illiterate (7.3%).The table provides insights into the social status of the respondents based on marital status, age, religion, caste, family structure, place of residence and educational qualifications.

Table 4.2
Economic Status of Respondents

Variable		Frequency	Percent
Ration Card Type	APL	257	66.6
	BPL	129	33.4
Occupation	No job	119	30.8
	Student	61	15.8
	Self employed	67	17.4
	Casual labour	39	10.1
	Domestic servant	3	.8
	Private	60	15.5
	Government	25	6.5
	Professional	12	3.1
Ownership of land	Not Owned	17	4.4
	Own	369	95.6
Possession of house	Owned	358	92.7
	Relatives	2	.5
	Rent	26	6.7
Income Status	Below 20000	195	50.5
	20000-40000	98	25.4
	40000-60000	56	14.5
	60000-80000	21	5.4
	80000-100000	10	2.6
	Above 100000	6	1.6
Total		386	100.0

Source: Primary Survey, 2023

Table 4.2 provides a comprehensive overview of the economic status of the respondents in Malappuram District. According to the data, the majority of the respondents are belonging to an APL (Above Poverty Line) ration card, accounting 66.6% of the total. This suggests that a significant portion of the respondents did not fall under the official poverty line. On the other hand, around 33.4% of the respondents are belonging to a BPL (Below Poverty Line) ration card, indicating a relatively smaller portion are living below the poverty line. In terms of occupation, it was observed that, number of respondents did not have a job, representing a 30.8% of the total. This group may include individuals who were unemployed or not actively seeking employment. Additionally, 15.8% of the respondents were students, indicating a significant proportion of the population under study was still pursuing education. Other common occupations among the respondents included self-employment (17.4%), casual labour (10.1%), and working in the private sector

(15.5%). A smaller percentage of respondents were engaged in government jobs (6.5%) or worked as professionals (3.1%). Regarding land ownership, the data revealed that most respondents (95.6%), have owned land. This suggests that land ownership was prevalent among the surveyed population, indicating potential agricultural or property ownership patterns. However, a small percentage, around the 4.4%, did not own any land, potentially indicating a portion of the population without access to or ownership of land. In terms of housing, the data showed that many respondents, (92.7%), owned their own house. This indicates there is a significant proportion of households have home ownerships within the surveyed population. A very small percentage of respondents (0.5%) reported living in houses owned by relatives, which could suggest instances of intergenerational cohabitation or shared family properties. Additionally, about 6.7% of the respondents lived in rented accommodations, suggesting a smaller portion of the population residing in rented or leased homes. The income status of the respondents varied across different income brackets. The largest proportion of respondents, accounting for approximately 50.5%, had an income below Rs 20000. This suggests that a significant portion of the population surveyed had relatively lower income levels. Furthermore, 25.4% of the respondents fell within the income range of Rs 20000- Rs 40000, indicating a moderate-income level. Smaller percentages were observed in higher income brackets, with 14.5% falling in the range of Rs 40000- Rs 60000, 5.4% in Rs 60000- Rs 80000, 2.6% in Rs 80000- Rs 100000, and only 1.6% reporting an income above Rs 100000.

Table 4.3
Housing and Facilities Inventory

Variable		Frequency	Percent
Bathroom/ washroom	Attached	348	90.2
	Common	38	9.8
Kitchen	Inside	356	92.2
	Separate	30	7.8
Source of drinking water	Others	4	1.0
	Common well	12	3.1
	Own well	+ 307	79.5
	Piped	63	16.3
Quality of drinking water	Poor	4	1.0
	Good	173	44.8
	Average	24	6.2
	Excellent	185	47.9
Disposal of waste	Unused well	1	.3
	Open space	52	13.5
	Kitchen Garden	294	76.2
	Municipal canal	36	9.3
	Waste tank	3	.8
Cooking Fuel	Biogas	2	.5
	Electricity	12	3.1
	Gas	348	90.2
	Gas and electricity	5	1.3
	Gas and wood	16	4.1
	Kerosene	3	.8
Nature of House	Both thatched and tiled	30	7.8
	Both tiled and concrete	123	31.9
	Concrete	131	33.9
	Thatched	20	5.2
	Tiled	82	21.2
Floor of house	Cement	48	12.4
	Mud	3	.8
	Red oxide	8	2.1
	Tiles/Marbles/Granites	321	83.2
	Wood	6	1.6
Total		**386**	**100.0**

Source: Primary Survey, 2023

Table 4.3 shows a detailed overview of the housing conditions and facilities among the surveyed respondents. The data reveals important insights about the availability and quality of amenities within households. Regarding bathrooms/washrooms, most respondents (90.2%) have an attached facility, while 9.8% share a common one. In terms of kitchens, 92.2% have an indoor kitchen, while 7.8% have a separate kitchen. When it comes to drinking water sources, the data shows that 79.5% of respondents have their own well, 16.3% rely on piped water, and a small percentage use other sources (1.0% have an alternative source, and 3.1% depend on a common well). The quality of drinking water is reported as excellent for 47.9% of respondents, good for 44.8%, average for 6.2%, and poor for 1.0%. Regarding waste disposal, the majority of respondents (76.2%) utilize a kitchen garden, while 13.5% use open spaces and 9.3% rely on municipal canals. A small portion uses an unused well (0.3%) or a waste tank (0.8%). In terms of cooking fuel, the data shows that gas is the most commonly used fuel, with 90.2% of respondents relying on it. Other fuel sources include electricity (3.1%), gas combined with electricity (1.3%), gas combined with wood (4.1%), biogas (0.5%), and kerosene (0.8%). The table also provides insights into the nature and floor type of houses. For the nature of the house, the most common types are concrete roofs (33.9%), followed by both tiled and concrete roofs (31.9%) and tiled roofs (21.2%). As for the floor, most houses have tiles, marbles, or granites (83.2%), followed by cement floors (12.4%), red oxide floors (2.1%), wooden floors (1.6%), and mud floors (0.8%). Table offers a comprehensive understanding of the housing conditions and facilities available to the surveyed respondents. The data highlights the prevalence of attached bathrooms, indoor kitchens, and personal wells for drinking water. It also sheds light on the sources and quality of drinking water, waste disposal practices, cooking fuel choices, and the nature and flooring of houses. This information is essential for evaluating the living standards and infrastructure.

Table 4.4
Household Amenities

Facilities	Frequency	Percent
Electricity	384	99.5
Mobile	383	99.2
TV	354	91.7
Refrigerator	367	95.1
Washing Machine	321	83.2
AC	147	38.1
Computer / PC	146	37.8
Grinder/ Mixer	250	64.8
Vehicle	308	79.8

Source: Primary Survey, 2023

Table 4.4 provides valuable insights into the availability of household amenities among the surveyed respondents, shedding light on the living standards and quality of life within the studied population. The table outlines the frequency and percentage of households that possess various amenities, allowing for a comprehensive understanding of the level of infrastructure and technology adoption. The high percentage of households with access to electricity (99.5%) is a significant finding. Access to electricity is a fundamental requirement for modern living, enabling the use of various electrical appliances and lighting, supporting educational and economic activities, and enhancing overall comfort and convenience. This high level of electricity access suggests that the majority of households have the necessary infrastructure to meet their basic needs and engage in activities that require electrical power. The widespread availability of mobile phones (99.2%) is another crucial observation from the table. Mobile phones have become essential communication tools, connecting individuals to information, services, and networks. They play a vital role in facilitating communication, accessing educational resources, conducting business transactions, and staying connected to the larger world. The high percentage of households with mobile phones indicates the prevalence of communication technology and its impact on social connectivity and access to information within the surveyed population. The presence of amenities such as televisions (91.7%), refrigerators (95.1%), washing machines (83.2%), and grinders/mixers (64.8%) further highlights the level of comfort and convenience

enjoyed by a significant portion of households. These amenities contribute to improving the quality of life by providing entertainment, preserving food, streamlining household chores, and enhancing overall efficiency in daily tasks. Their availability indicates a certain level of economic well-being and access to modern consumer goods. It is worth noting that while the ownership of air conditioning (38.1%), computers/personal computers (37.8%), and vehicles (79.8%) is comparatively lower, their presence still signifies a higher level of affluence and access to additional amenities. Air conditioning provides comfort in hot climates, computers facilitate access to information and educational resources, and vehicles offer transportation convenience and mobility. The data provides a snapshot of the infrastructure and amenities available within households, aiding in assessing the level of development, technology adoption, and living standards.

4.2 Indicators of Human Development in Malappuram District

In this section, the study explored a range of indicators that provide insights into the human development landscape of Malappuram District. The study examined key metrics such as literacy rates, educational attainment, healthcare accessibility, life expectancy, employment opportunities, and poverty levels. By analysing these indicators, aim to establish a baseline understanding of the district's current status in terms of human development.

4.2.1 Assessing the Health Status of Respondents

The current section adopts a multidimensional approach to explore the health status of respondents. It examines indicators such as overall physical health, mental well-being, prevalence of chronic conditions, healthcare utilization, and access to healthcare facilities. This comprehensive assessment provides a nuanced understanding of the complex interplay between individual health, socio-economic factors, and environmental determinants that shape the health status within the studied population.

Table 4.5

Average Rating of Health Status of Respondents

Variable		N	Mean	Std. Deviation	Std. Error	ANOVA/ t-test
Marital Status	Married	301	3.61	1.07	0.06	F (3,382) =2.530 p= 0.057
	Separated	7	3.00	1.15	0.44	
	Single	69	3.88	1.09	0.13	
	Widow	9	3.22	1.09	0.36	
	Total	386	3.64	1.08	0.05	
Place	Rural	316	3.53	1.08	0.06	F (2,383) =11.004 p= 0.000
	Semi-urban	4	4.50	0.58	0.29	
	Urban	66	4.15	0.93	0.11	
	Total	386	3.64	1.08	0.05	
Occupation	Casual labour	39	3.36	1.09	0.17	F (7,378) =0.832 p= 0.561
	Domestic servant	3	3.67	0.58	0.33	
	Govt job	25	3.56	0.87	0.17	
	No job	119	3.62	1.07	0.10	
	Private	60	3.62	1.11	0.14	
	Professional	12	4.08	1.24	0.36	
	Self employed	67	3.73	1.02	0.13	
	Student	61	3.74	1.18	0.15	
	Total	386	3.64	1.08	0.05	
Gender	Female	43	3.74	1.14	0.17	t (384)=0.655 p= 0.513
	Male	343	3.63	1.07	0.06	
	Total	386	3.64	1.08	0.05	

Source: Primary Survey, 2023, Note: Label: - Poor-1, Excelleant-5

Table 4.5 presents the average rating of the health status of respondents are based on different variables. The table provides information on the number of participants (N), the mean rating, standard deviation (Std. Deviation), standard error (Std. Error), and the results of ANOVA or t-tests for each variable. With respect to Marital Status, the table shows that married respondents (N=301) had an average health rating of 3.61, with a standard deviation of 1.07. The standard error is 0.06. The ANOVA test results indicate a non-significant relationship between marital status and health rating, with p=0.057. The average health ratings for separated (N=7), single (N=69), and widow (N=9) respondents are also provided. Considering the place of residence, the table further reveals that respondents from rural areas (N=316) had an average health rating of 3.53, with a standard deviation of 1.08. The standard error is 0.06.

The ANOVA test results show a significant relationship between place of residence and health rating, with p=0.000. The average health ratings for semi-urban (N=4) and urban (N=66) respondents are also presented. With regards to occupation, it indicates that respondents engaged in different occupations, such as casual labour, domestic servant, government, no job, private sector, professional, self-employed, and student. The ANOVA test results suggest a non-significant relationship between occupation and health rating, with p=0.561. Gender wise analysis result reveals that female respondents (N=43) had an average health rating of 3.74, with a standard deviation of 1.14. The t-test results indicate a non-significant difference between genders in terms of health rating, with p=0.513. The average health rating for male respondents (N=343) is also provided.

Table 4.6
Average Rating of Mental Health Status of Respondents

Variable		N	Mean	Std. Deviation	Std. Error	ANOVA/ t-test
Marital Status	Married	301	3.76	1.03	0.06	F (3,382) =7.109 p= 0.000
	Separated	7	3.00	1.29	0.49	
	Single	69	4.25	0.83	0.10	
	Widow	9	3.22	1.30	0.43	
	Total	386	3.82	1.03	0.05	
Place	Rural	316	3.72	1.03	0.06	F (2,383) =8.569 p= 0.000
	Semi-urban	4	4.25	0.50	0.25	
	Urban	66	4.27	0.94	0.12	
	Total	386	3.82	1.03	0.05	
Occupation	Casual labour	39	3.38	1.02	0.16	F (7,378) =2.652 p= 0.011
	Domestic servant	3	2.67	2.08	1.20	
	Govt.	25	3.92	0.76	0.15	
	No job	119	3.76	1.06	0.10	
	Private	60	3.77	1.13	0.15	
	Professional	12	4.08	1.24	0.36	
	Self employed	67	3.93	0.94	0.12	
	Student	61	4.11	0.88	0.11	
	Total	386	3.82	1.03	0.05	
Gender	Female	43	3.88	1.10	0.17	t (384) =0.439 p= 0.661
	Male	343	3.81	1.02	0.06	
	Total	386	3.82	1.03	0.05	

Source: Primary Survey, 2023, Note: Label: - Poor-1, Excelleant-5

Table 5.6 presents the average rating of the mental health status of respondents, providing insights into the relationship between various variables and mental well-being. The table includes information on the number of participants (N), mean rating, standard deviation (Std. Deviation), standard error (Std. Error), and the results of ANOVA or t-tests for each variable.

Marital Status: The table indicates that married respondents (N=301) had an average mental health rating of 3.76, with a standard deviation of 1.03. The standard error is 0.06. The ANOVA test results reveal a significant relationship between marital status and mental health rating, with p=0.000. The average mental health ratings for separated (N=7), single (N=69), and widow (N=9) respondents are also provided.

Place: The table further demonstrates that respondents residing in rural areas (N=316) had an average mental health rating of 3.72, with a standard deviation of 1.03. The standard error is 0.06. The ANOVA test results indicate a significant relationship between place of residence and mental health rating, with p=0.000. The average mental health ratings for semi-urban (N=4) and urban (N=66) respondents are also presented.

Occupation: The table presents the average mental health ratings for respondents across different occupations. The ANOVA test results suggest a significant relationship between occupation and mental health rating, with p=0.011. Respondents engaged in various occupations, such as casual labour, domestic servant, government, no job, private sector, professional, self-employed, and student, are included.

Gender: The table shows that female respondents (N=43) had an average mental health rating of 3.88, with a standard deviation of 1.10. The t-test results indicate no significant difference in mental health ratings between genders, with p=0.661.

The data in the table is derived from a primary survey conducted in 2023, and the ratings range from poor (1) to excellent (5). The table offers insights into the average ratings of mental health status among respondents based on different variables, contributing to a better understanding of the relationship between these factors and mental well-being.

Table 4.7
Physical Activity Status of Respondents

Variable			Physical Activity		Total	Chi-Square (df)
			No Activity	Had Activity		
Marital status	Married	N	125	176	301	Value = 13.089 (3) P=0.004
		%	71.0	83.8	78.0	
	Separated	N	3	4	7	
		%	1.7	1.9	1.8	
	Single	N	40	29	69	
		%	22.7	13.8	17.9%	
	Widow	N	8	1	9	
		%	4.5	0.5	2.3	
Place of residence	Rural	N	130	186	316	Value = 14.374 (2) P=0.001
		%	73.9	88.6	81.9	
	Semi urban	N	2	2	4	
		%	1.1	1.0	1.0	
	Urban	N	44	22	66	
		%	25.0	10.5	17.1	
Gender	Female	N	25	18	43	Value = 3.069 (1) P=0.080
		%	14.2	8.6	11.1	
	Male	N	151	192	343	
		%	85.8	91.4	88.9	
Total		N	176	210	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.7 provides an overview of the physical activity status of respondents, examining the relationship between various variables and engagement in physical activity. The table includes information on the number of participants in each category, percentages, and the results of the Chi-Square test for each variable.

Marital Status: The table displays the physical activity status of respondents based on their marital status. Among married respondents (N=301), 125 reported no physical activity, while 176 reported engaging in physical activity. The Chi-Square test results indicate a significant relationship between marital status and physical activity, with a value of 13.089 and p=0.004. The percentages of respondents with and without physical activity are also provided for each marital status category.

Place of Residence: The table further presents the physical activity status of respondents according to their place of residence. Among those residing in rural

areas (N=316), 130 reported no physical activity, while 186 reported engaging in physical activity. The Chi-Square test results reveal a significant relationship between place of residence and physical activity, with a value of 14.374 and p=0.001. The percentages of respondents with and without physical activity are also provided for each place of residence category.

Gender: The table shows the physical activity status of respondents based on their gender. Among female respondents (N=43), 25 reported no physical activity, while 18 reported engaging in physical activity. The Chi-Square test results indicate no significant relationship between gender and physical activity, with a value of 3.069 and p=0.080.

Table 4.8
Frequency of Felt Nervous or Anxious Over the Past Two Weeks

Variable			Frequency of Felt Nervous or Anxious				Total	Chi-Square (df)
			Frequently	Nearly Everyday	Several days	Not at all		
Marital status	Married	N	77	19	92	113	301	Value = 27.654 (9) P=0.001
		%	81.1	73.1	89.3	69.8	78.0	
	Separated	N	4	1	2	0	7	
		%	4.2	3.8	1.9	0.0	1.8	
	Single	N	12	5	7	45	69	
		%	12.6	19.2	6.8	27.8	17.9	
	Widow	N	2	1	2	4	9	
		%	2.1	3.8	1.9	2.5	2.3	
Place of residence	Rural	N	85	23	94	114	316	Value = 33.537 (6) P=0.000
		%	89.5	88.5	91.3	70.4	81.9	
	Semi urban	N	0	0	3	1	4	
		%	0.0	0.0	2.9	0.6	1.0	
	Urban	N	10	3	6	47	66	
		%	10.5	11.5	5.8	29.0	17.1	
Gender	Female	N	4	5	7	27	43	Value = 13.290 (3) P=0.004
		%	4.2	19.2	6.8	16.7	11.1	
	Male	N	91	21	96	135	343	
		%	95.8	80.8	93.2	83.3	88.9	
Total		N	95	26	103	162	386	
		%	100.0	100.0	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.8 presents a comprehensive and visually appealing overview of the frequency of feeling nervous or anxious over the past two weeks, focusing on various variables. The table provides a clear break-up of the data, including the total number of participants, frequencies, percentages, and statistical measures such as chi-square values and degrees of freedom. Let's delve deeper into the table and its implications. First, the table explores the relationship between marital status and the frequency of feeling nervous or anxious. The participants are categorized into four marital status groups: married, separated, single, and widowed. For each group, the table displays the frequencies and percentages of individuals who reported feeling nervous or anxious frequently, nearly every day, several days, or not at all. This information allows us to observe patterns and draw insights about the association between marital status and mental well-being. The chi-square value of 27.654 (with 9 degrees of freedom) indicates a significant relationship between marital status and the frequency of feeling nervous or anxious (p-value = 0.001). This suggests that marital status might be a contributing factor to the reported levels of nervousness or anxiety. Moving on, the table investigates the impact of the place of residence on the reported frequency of feeling nervous or anxious. The participants are categorized into three groups based on their place of residence: rural, semi-urban, and urban. The frequencies and percentages of respondents experiencing different levels of nervousness or anxiety are presented for each residential category. This analysis helps us understand any potential variations in mental well-being across different residential areas. The chi-square value of 33.537 (with 6 degrees of freedom) indicates a significant association between the place of residence and the frequency of feeling nervous or anxious (p-value = 0.000). This suggests that the place of residence is a relevant factor when considering the reported levels of nervousness or anxiety. Additionally, the table examines the relationship between gender and the frequency of feeling nervous or anxious. The frequencies and percentages are provided for males and females, showcasing their respective experiences of nervousness or anxiety. The chi-square value of 13.290 (with 3 degrees of freedom) indicates a significant association between gender and the frequency of feeling nervous or anxious (p-value = 0.004). This implies that gender might play a role in

the reported levels of nervousness or anxiety, warranting further investigation into potential gender-related factors influencing mental well-being. So, Table 5.8 offers a visually pleasing presentation of data, allowing for a comprehensive analysis of the frequency of feeling nervous or anxious across different variables. The frequencies, percentages, and statistical measures provide a solid foundation for understanding the relationships between marital status, place of residence, gender, and mental well-being. These insights, derived from a primary survey conducted in 2023, contribute to the existing body of knowledge on the subject and may guide future research or interventions aimed at improving mental health outcomes.

Table 4.9
Frequency of Felt Depressed or Hopeless Over the Past Two Weeks

Variable			Frequency of Felt Nervous or Anxious				Total	Chi-Square (df)
			Frequently	Nearly Everyday	Several days	Not at all		
Marital status	Married	N	62	44	107	88	301	Value = 20.449 (9) P=0.015
		%	80.5	72.1	74.3	84.6	78.0	
	Separated	N	3	3	1	0	7	
		%	3.9	4.9	0.7	0.0	1.8	
	Single	N	9	14	34	12	69	
		%	11.7	23.0	23.6	11.5	17.9	
	Widow	N	3	0	2	4	9	
		%	3.9	0.0	1.4	3.8	2.3%	
Place of residence	Rural	N	69	54	136	57	316	Value = 73.122 (6) P=0.000
		%	89.6	88.5	94.4	54.8	81.9	
	Semi urban	N	0	1	1	2	4	
		%	0.0	1.6	0.7	1.9	1.0	
	Urban	N	8	6	7	45	66	
		%	10.4	9.8	4.9	43.3	17.1	
Gender	Female	N	3	8	23	9	43	Value = 8.368 (3) P=0.039
		%	3.9	13.1	16.0	8.7	11.1	
	Male	N	74	53	121	95	343	
		%	96.1	86.9	84.0	91.3	88.9	
Total		N	77	61	144	104	386	
		%	100.0	100.0	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.9 displays the frequency of feeling nervous or anxious over the past two weeks among respondents, examining the relationship between various variables and the reported frequency. The table provides information on the number of participants

in each category, percentages, and the results of the Chi-Square test for each variable.

Marital Status: The table presents the frequency of feeling nervous or anxious based on respondents' marital status. Among married respondents (N=301), the majority (78.0%) reported feeling nervous or anxious not at all, while the percentages for feeling nervous or anxious frequently, nearly every day, and several days were 80.5%, 72.1%, and 74.3% respectively. The Chi-Square test results indicate a significant relationship between marital status and the frequency of feeling nervous or anxious, with a value of 20.449 and p=0.015. The percentages for each frequency category are also provided for separated, single, and widow respondents.

Place of Residence: The table further examines the frequency of feeling nervous or anxious among respondents based on their place of residence. Among those residing in rural areas (N=316), the percentages for feeling nervous or anxious frequently, nearly every day, several days, and not at all were 89.6%, 88.5%, 94.4%, and 54.8% respectively. The Chi-Square test results reveal a significant relationship between place of residence and the frequency of feeling nervous or anxious, with a value of 73.122 and p=0.000. The percentages for each frequency category are also provided for semi-urban and urban respondents.

Gender: The table shows the frequency of feeling nervous or anxious among respondents based on their gender. Among female respondents (N=43), the percentages for feeling nervous or anxious frequently, nearly every day, several days, and not at all were 3.9%, 13.1%, 16.0%, and 8.7% respectively. The Chi-Square test results indicate a significant relationship between gender and the frequency of feeling nervous or anxious, with a value of 8.368 and p=0.039. The percentages for each frequency category are also provided for male respondents.

Regression analysis of general health Status

Table 4.10

Description of Variables

Variable	Type of Variable	Nature of Variable
Rating of General Health	Dependent Variable	Scale (1-5)
Physical Activity	Independent Variable	Dummy
Bed Ridden	Independent Variable	Dummy
Frequency of Felt Nervous or Anxious	Independent Variable	Ordinal
Frequency of Felt Depressed or Hopeless	Independent Variable	Ordinal
Frequency of Felt little Interest or Pleasure	Independent Variable	Ordinal
Choice of Food	Independent Variable	Dummy
Timely Food on Consumption	Independent Variable	Dummy
Use of Intoxicants	Independent Variable	Dummy
Smoking	Independent Variable	Dummy
Recreation and Leisure in a Week	Independent Variable	Ordinal
Frequency of House Cleaned	Independent Variable	Ordinal
Public Health Facility	Independent Variable	Dummy

Source: Primary Survey, 2023

Table 4.11

Descriptive Statistics

	Mean	Std. Deviation	N
Rating of General Health	3.5407	1.07099	386
Physical Activity	2.4361	0.54231	386
Bed Ridden	1.3023	0.45993	386
Frequency of Felt Nervous or Anxious	2.7500	1.20313	386
Frequency of Felt Depressed or Hopeless	2.5814	1.03541	386
Frequency of Felt little Interest or Pleasure	1.7180	0.65164	386
Choice of Food	3.5145	1.50052	386
Timely Food Consumption	2.9331	1.04321	386
Use of Intoxicants	1.3227	0.46818	386
Smoking	2.2093	1.40740	386
Recreation and Leisure in a week	3.1860	1.77617	386
Frequency of House Cleaned	2.8517	1.40922	386
Public Health Facility	1.9477	0.22301	386

Source: Primary Survey, 2023

Table 4.11 presents the descriptive statistics for various variables related to general health and lifestyle factors. The mean rating of general health is 3.5407, indicating a moderate average rating. The standard deviation of 1.07099 suggests some variation in the ratings among the respondents. The data is based on a sample size of 386 individuals. The mean value of 2.4361 represents the average level of physical activity reported by the respondents. The standard deviation of 0.54231, suggests some variability in the reported physical activity levels. The mean value of 1.3023 indicates that, on average, respondents reported being bedridden for a small portion of the time. The standard deviation of 0.45993 suggests some variability in the reported bedridden status among the respondents. The mean value of 2.7500 suggests that, on average, respondents experienced nervousness or anxiety at a moderate frequency. The standard deviation of 1.20313 indicates some variability in the reported frequencies among the respondents. The mean value of 2.5814 indicates that, on average, respondents reported feeling depressed or hopeless at a moderate frequency. The standard deviation of 1.03541 suggests some variability in the reported frequencies of feeling depressed or hopeless among the respondents. The mean value of 1.7180 suggests that, on average, respondents reported feeling little interest or pleasure at a relatively low frequency. The standard deviation of 0.65164 indicates some variability in the reported frequencies among the respondents. The mean value of 3.5145 represents the average choice of food reported by the respondents. The standard deviation of 1.50052 suggests some variability in the reported food choices among the respondents. The mean value of 2.9331 indicates that, on average, respondents reported timely consumption of food. The standard deviation of 1.04321 suggests relatively low variability in the reported food consumption habits among the respondents. The mean value of 1.3327 suggests that, on average, respondents reported a moderate level of intoxicant use. The standard deviation of 0.46818 indicates some variability in the reported use of intoxicants among the respondents. The mean value of 2.2093 indicates that, on average, respondents reported a relatively low level of smoking. The standard deviation of 1.40740 suggests some variability in the reported smoking habits among the respondents. The data is based on a sample size of 386 individuals. Mean value of

3.1860 represents the average frequency of recreation and leisure activities reported by the respondents in a week. The standard deviation of 1.77617 indicates some variability in the reported frequencies among the respondents. The mean value of 2.8517 suggests that, on average, respondents reported cleaning their houses at a moderate frequency. The standard deviation of 1.40922 indicates relatively low variability in the reported frequencies of house cleaning among the respondents. The mean value of 1.9477 indicates that, on average, respondents reported utilizing public health facilities. The standard deviation of 0.22301 suggests relatively low variability in the reported usage of public health facilities among the respondents. These descriptive statistics offer insights into the characteristics and variations observed in the surveyed population concerning general health and lifestyle factors.

The general views from the table 4.11 shows moderate ratings for general health, with some variation among respondents. People reported moderate levels of physical activity and bedridden status, with varying frequencies of nervousness, depression, and interest or pleasure. Food choices and consumption habits varied slightly. Intoxicant use and smoking were moderate to low. Recreational activities and house cleaning occurred moderately, and public health facility usage was reported at a consistent level.

General Health= F (Physical Activity, Bed Ridden, Frequency of felt nervous or anxious, Frequency of felt depressed or hopeless, Frequency of Felt little interest or pleasure, Choice of Food, Timely food consumption, Use of intoxicants, Smoking, Leisure in a week, Frequency of house cleaned and public health facility)

Table 4.12
Regression Result of Factors Influencing General Health

Model Summary					
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	
.271	.073	.040	1.04951	1.782	
ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	28.842	12	2.404	2.182	.012
Residual	364.588	331	1.101		
Total	393.430	343			
Coefficients					
	Unstandardized Coefficients		Stand. Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.682	.546		6.748	.000
Physical Activity	.128	.123	.059	1.038	.300
Bed Ridden	-.106	.150	-.046	-.709	.479
Frequency of Felt Nervous or Anxious	.084	.062	.095	1.350	.178
Frequency of felt Depressed or Hopeless	-.083	.068	-.080	-1.206	.229
Frequency of Felt Little Interest or Pleasure	.218	.091	.132	2.401	.017
Choice of Food	-.237	.116	-.111	-2.041	.042
Timely Food Consumption	.043	.232	.010	.186	.852
Use of Intoxicants	-.136	.051	-.135	-2.680	.008
Smoking	-.268	.148	-.102	-1.806	.072
Recreation and Leisure in a Week	-.084	.038	-.140	-2.249	.025
Frequency of House Cleaned	.043	.145	.017	.299	.765
Public Health Facility	-.340	.263	-.071	-1.290	.198

Source: Primary Survey, 2023

Table 4.12 presents the regression analysis results to explain the factors that influence general status. The table includes information on the model summary, ANOVA, and coefficients of the independent variables.

Model Summary:

R: The correlation coefficient (multiple correlation) indicates a weak positive relationship, with a correlation coefficient (R) of 0.271.

R Square: The coefficient of determination shows that 7.3% of the variance in psychological well-being can be explained by the independent variables.

The adjusted R Square of 0.040 adjusts for the number of predictors and sample size, providing a more conservative estimate of the proportion of variance explained.

The standard error of the estimate (1.04951) represents the average difference between the observed general health values and the predicted values from the regression model

The standard error of the estimate (1.04951) represents the average difference between the observed general health values and the predicted values from the regression model.

Durbin-Watson statistic of 1.782 suggests the absence of significant autocorrelation in the residuals, which enhances the reliability of the analysis

ANOVA:

The ANOVA section, it is observed that the regression model is statistically significant. The regression sum of squares of 28.842 indicates the amount of variability in general health that is explained by the predictors, while the residual sum of squares of 364.588 represents the unexplained variability. The associated F-statistic of 2.182 further supports the significance of the regression model.

Coefficients:

Based on the regression analysis results presented in Table 4.12, let's discuss the variables and their associations with general health status:

Looking at the coefficients, the constant term (intercept) of 3.682 represents the estimated general health score when all predictors are zero. Each predictor variable in the model is examined in terms of its unstandardized coefficient (B), standard error, standardized coefficient (Beta), t-value, and p-value. These coefficients provide insights into the relationship between each predictor and general health. For instance, the standardized coefficient (Beta) reveals the relative importance of each predictor variable in influencing general health. The regression results demonstrate that the predictors included in the analysis collectively have a statistically significant impact on general health. The coefficients shed light on the direction and magnitude of influence that each predictor variable holds.

- Frequency felt little interest or pleasure (Beta = 0.218, p = 0.017): This variable significantly influences the dependent variable in the positive direction. The dependant variable increases by 0.218 for every unit increase in the general health status.

- Food preference (Beta = -.237, p = 0.042) significantly has a negative impact on the dependent variable. The general health status of the people decreases by .237 as this variable increases.

- Use of intoxicants (Beta = -0.135, p = 0.008): This variable has a significant negative impact on the dependent variable. An increase in this variable corresponds to a 0.135 decrease in the general health status of the people

- Recreation and leisure in a week (Beta = -0.140, p = 0.025): This variable has a significant negative impact on the dependent variable. An increase in this variable corresponds to a 0.140 decrease in the general health status of the people

Table 4.13

Choice of Food

Variable			Choice of Food		Total	Chi-Square (df)
			Fast Food	Homely Cooked Food		
Place of residence	Rural	N	156	160	316	Value = 18.150 (2) P=0.000
		%	91.2	74.4	81.9	
	Semi urban	N	1	3	4	
		%	0.6	1.4	1.0	
	Urban	N	14	52	66	
		%	8.2	24.2	17.1	
Gender	Female	N	20	23	43	Value = 0.096 (1) P=0.757
		%	11.7	10.7	11.1	
	Male	N	151	192	343	
		%	88.3	89.3	88.9	
Occupation	Casual labour	N	10	29	39	Value = 23.343 (7) P=0.001
		%	5.8	13.5	10.1%	
	Domestic servant	N	2	1	3	
		%	1.2	0.5	0.8	
	Government	N	7	18	25	
		%	4.1	8.4	6.5	
	No job	N	60	59	119	
		%	35.1	27.4	30.8	
	Private	N	27	33	60	
		%	15.8	15.3	15.5	
	Professional	N	6	6	12	
		%	3.5	2.8	3.1	
	Self employed	N	21	46	67	
		%	12.3	21.4	17.4	
	Student	N	38	23	61	
		%	22.2	10.7	15.8	
Total		N	171	215	386	
		%	100.0%	100.0	100.0	

Source: Primary Survey, 2023

Table 4.13 provides a comprehensive analysis of the respondents' choice of food, considering their place of residence, gender, and occupation. The data reveals

interesting insights into the factors influencing food preferences among the surveyed population. In terms of place of residence, the table demonstrates a significant association between the location of respondents and their food choices. It is observed that individuals residing in rural areas exhibit a strong preference (91.2%) for homely cooked food, while only a small percentage (8.2%) opt for fast food. This stark contrast can be attributed to various factors. Rural areas often have a stronger traditional and cultural emphasis on home-cooked meals, which are considered healthier and more wholesome. Additionally, the availability and accessibility of fast food establishments might be relatively limited in rural settings compared to urban areas. Hence, individuals in rural areas tend to rely more on homemade food options. Conversely, respondents in urban areas display a higher inclination towards fast food, with 24.2% preferring it over homely cooked food. Urban settings are typically characterized by a fast-paced lifestyle, convenience-oriented food choices, and the presence of numerous fast-food outlets. The accessibility and marketing strategies employed by fast-food chains in urban areas can significantly influence people's food preferences, leading to a greater preference for fast food. Regarding gender, the table indicates that there is no statistically significant difference in food choices between males and females. Both genders show a similar preference for homely cooked food, with 88.3% of males and 89.3% of females favouring it. This suggests that cultural and household factors, rather than gender, play a more prominent role in shaping food preferences. The occupation-based analysis reveals noteworthy variations in food choices. Different occupational groups exhibit distinct preferences for homely cooked food. For instance, casual labourers have the lowest percentage (5.8%) of opting for homely cooked food, potentially due to factors such as limited time, financial constraints, or lack of cooking facilities. Conversely, students have the highest preference (22.2%) for homely cooked food, which can be attributed to factors like cost considerations, health-consciousness, and reliance on home-cooked meals due to limited dining options on campuses. In summary, the findings from Table 5.13 highlight the influence of place of residence and occupation on individuals' choice of food. Factors such as cultural traditions, lifestyle patterns, accessibility to different types of food outlets, and personal circumstances can significantly shape these preferences. Understanding these associations can aid policymakers, health

practitioners, and nutritionists in developing targeted interventions and educational programs to promote healthier food choices within specific populations.

Table 4.14

Timely Food Consumption

Variable			Food Consumption		Total	Chi-Square (df)
			Not Timely	On Time		
Place of residence	Rural	N	19	297	316	Value = 19.224 (2) P=0.000
		%	57.6	84.1	81.9	
	Semi urban	N	2	2	4	
		%	6.1	0.6	1.0	
	Urban	N	12	54	66	
		%	36.4	15.3	17.1	
Gender	Female	N	7	36	43	Value = 3.698 (1) P=0.054
		%	21.2	10.2	11.1	
	Male	N	26	317	343	
		%	78.8	89.8	88.9	
Occupation	Casual labour	N	1	38	39	Value = 7.862 (7) P=0.345
		%	3.0	10.8	10.1	
	Domestic servant	N	0	3	3	
		%	0.0	0.8	0.8	
	Government	N	1	24	25	
		%	3.0	6.8	6.5	
	No job	N	10	109	119	
		%	30.3	30.9	30.8	
	Private	N	7	53	60	
		%	21.2	15.0	15.5	
	Professional	N	3	9	12	
		%	9.1	2.5	3.1%	
	Self employed	N	5	62	67	
		%	15.2	17.6	17.4	
	Student	N	6	55	61	
		%	18.2	15.6	15.8	
Total		N	33	353	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.14 provides insights into the timely consumption of food among the surveyed population, considering variables such as place of residence, gender, and occupation. The data highlights notable patterns and associations that shed light on individuals' adherence to timely food consumption practices. First, analysing the place of residence, the table reveals a significant association between the respondents' location and their food consumption habits. It shows that individuals residing in rural areas have a lower percentage (57.6%) of consuming food on time, while a higher percentage (84.1%) in urban areas adhere to timely food consumption. This disparity can be attributed to various factors. In rural areas, where the lifestyle is often more relaxed and traditional, there may be a relatively less rigid adherence to strict meal times. Additionally, factors such as agricultural work patterns or availability of food resources may contribute to variations in meal timings. On the other hand, urban areas are typically characterized by a more structured lifestyle and time-bound routines, including fixed meal times, due to work schedules and urban culture. In terms of gender, the data suggests a marginally significant association between gender and timely food consumption. The percentage of females consuming food on time is slightly lower (10.2%) compared to males (89.8%). This difference could be influenced by various factors, including cultural norms, household responsibilities, and societal expectations, which may affect the flexibility and ability to adhere to strict meal timings. Regarding occupation, the table indicates no significant association between occupation and timely food consumption. Although some variations exist, they are not statistically significant. Casual labourers have the lowest percentage (10.8%) of consuming food on time, while self-employed individuals have the highest percentage (17.6%). These differences could be attributed to variations in work schedules, access to breaks, or personal preferences. However, it is important to note that the lack of statistical significance suggests that occupation alone may not be the primary determinant of timely food consumption.

Table 4.15

Health-Related Habits and Facilities

Variable	Frequency	Percent
Use of Intoxicants	115	29.8
Smoking	73	18.9
Mental Disorder in a Family	36	9.3
Physical Disability in a Family	24	6.2
Habit of Using Soft Drink	224	58.0
Habit Drinking Tea/Coffee	331	85.8
Habit of Reading	324	83.9
Routine Medical Check-up	245	63.5
Public Health Facility Near	366	94.8
Use of Benefits of Health Facilities	337	87.3

Source: Primary Survey, 2023

Table 4.15 provides information on various health-related habits and facilities among the surveyed population. The data offers insights into the frequency and percentage of individuals engaging in specific habits or utilizing health-related services and facilities. According to the table, 29.8% of the respondents reported using intoxicants, indicating a concerning prevalence of this habit within the surveyed population. Additionally, 18.9% of individuals reported smoking, which is another significant health-related habit with potential negative consequences for overall well-being. The table also reveals that 9.3% of respondents reported having a family member with a mental disorder, while 6.2% reported having a family member with a physical disability. These figures highlight the presence of such conditions within families and indicate the potential impact on individuals' health and well-being. In terms of dietary habits, 58.0% of respondents reported having a habit of consuming soft drinks, while a higher percentage of 85.8% reported a habit of drinking tea or coffee. These habits reflect the prevalence of certain beverage preferences and choices among the surveyed population. Furthermore, the table indicates that a significant proportion of individuals engage in health-promoting habits. For example, 83.9% reported a habit of reading, which can contribute to mental stimulation and well-being. Additionally, 63.5% reported routine medical

check-ups, demonstrating a proactive approach to monitoring their health. The availability and utilization of health facilities are also highlighted in the table. A substantial percentage of respondents (94.8%) reported the presence of a public health facility near them, indicating accessibility to healthcare services. Moreover, 87.3% reported using the benefits of health facilities, suggesting that individuals are utilizing the available services and resources for their healthcare needs.

Table 4.16

Type of Food Consumed

Type Food Consumed		**Frequency**	**Percent**
Food Grains	Not Organic	298	77.2
	Organic	88	22.8
Fruits and Vegetables	Not Organic	299	77.5
	Organic	87	22.5

Source: Primary Survey, 2023

Table 4.16 presents information on the type of food consumed by the surveyed population, specifically distinguishing between organic and non-organic options. The data reveals the frequency and percentage of individuals consuming food grains and fruits/vegetables in both organic and non-organic forms. According to the table, 77.2% of respondents reported consuming non-organic food grains, while 22.8% reported consuming organic food grains. This suggests that a significant portion of the surveyed population relies on conventionally grown food grains, which may involve the use of synthetic pesticides and fertilizers. Similarly, when it comes to fruits and vegetables, 77.5% of respondents reported consuming non-organic options, while 22.5% reported consuming organic ones. This indicates that a majority of individuals in the survey sample consume conventionally grown fruits and vegetables, which could potentially be treated with pesticides and other chemicals. The data in Table 5.16 highlights the need for attention to individuals' dietary choices and the prevalence of non-organic food consumption. It also suggests a growing awareness and preference for organic options, as indicated by the percentage of respondents consuming organic food grains and fruits/vegetables. The distinction between organic and non-organic food consumption is important as it can

have implications for individuals' health and environmental sustainability. Organic food is generally associated with lower exposure to synthetic chemicals and potentially higher nutritional value, while non-organic food may carry a higher risk of pesticide residues.

Table 4.17 provides information about the status of various diseases based on testing. Let's go through the table to understand its content:

The table has four columns: "Diseases," "Not Tested," "Normal," and "High." Each row represents a specific disease, and the cells in the table display the number of individuals falling into different categories.

Not Tested: This column shows the number of individuals who were not yet tested for the respective disease mentioned in each row. Normal: This column represents the number of individuals who were tested for the disease and had normal results. It indicates the count of people who were tested and did not show any signs or symptoms related to the disease. High: This column displays the number of individuals who were tested for the disease and had high or abnormal results. It indicates the count of people who were tested and showed signs or symptoms associated with the disease.

With respect to, Blood Pressure

Not Tested: N = 179 individuals were not tested for blood pressure.

Normal: N = 162 individuals were tested for blood pressure and had normal results.

High: N = 45 individuals were tested for blood pressure and had high or abnormal results.

The subsequent row provides the percentages for each category:

Not Tested: 46.4% of the population were not tested for blood pressure.

Normal: 42.0% of the tested population had normal blood pressure results.

High: 11.7% of the tested population had high or abnormal blood pressure results.

Table 4.17

Diseases' Status

Diseases		Not Tested	Normal	High
Blood Pressure	N	179	162	45
	%	46.4	42.0	11.7
Diabetes	N	162	139	85
	%	42.0	36.0	22.0
Cholesterol	N	221	124	41
	%	57.3	32.1	10.6
Thyroid	N	312	44	30
	%	80.8	11.4	7.8
Kidney diseases	N	352	23	11
	%	91.2	6.0	2.8
Arthritis	N	371	14	1
	%	96.1	3.6	.3
Fatty liver	N	356	23	7
	%	92.2	6.0	1.8
Heart diseases	N	355	20	11
	%	92.0	5.2	2.8
Cancer	N	370	13	3
	%	95.9	3.4	.8

Source: Primary Survey, 2023

4.2.2 Access to Education

Education is widely recognized as a fundamental right and a key driver of individual development and societal progress. It equips individuals with knowledge, skills, and opportunities to shape their lives, contribute to their communities, and participate in the global economy. However, despite the universal acknowledgement of the importance of education, access to quality education remains a significant challenge for many people around the world. The current part on "Access to Education" delves into the multifaceted aspects of educational access, exploring the barriers that prevent individuals from fully participating in and benefiting from educational opportunities. Access to education refers to the availability and opportunity for individuals to receive formal education, acquire knowledge, and develop essential skills. It encompasses various aspects such as physical access to educational institutions, financial affordability, and inclusivity regardless of one's background, gender, ethnicity, or socio-economic status. So, it examines the disparities and inequalities that exist in accessing education across different regions, communities,

and demographic groups. The current section analysed various dimensions of educational access, including geographical, economic, social, and gender-based disparities.

Table 4.18

Age and Education Status

Education		Age Category				Total
		Below 18	18-40	41-60	61-80	
Illiterate	N	0	3	22	3	28
	%	0.0	1.2	20.4	27.3	7.3
Upto SSLC	N	0	17	22	2	41
	%	0.0	7.0	20.4	18.2	10.6
SSLC	N	11	60	35	3	109
	%	44.0	24.8	32.4	27.3	28.2
+2	N	14	94	16	0	124
	%	56.0	38.8	14.8	0.0	32.1
Higher Education	N	0	68	13	3	84
	%	0.0	28.1	12.0	27.3	21.8
Total	N	25	242	108	11	386
	%	100.0	100.0	100.0	100.0	100.0
Chi-Square Result		Value= 101.512, df=12, p=0.000				

Source: Primary Survey, 2023

Table 4.18 presents data on age and education status, providing insights into the relationship between different age groups and their educational attainment. The table includes various education categories and their corresponding numbers (N) and percentages (%), along with a chi-square result that indicates the statistical significance of the relationship between age and education status. Analysing this table can help us understand access to education and its implications: The distribution of individuals across education categories based on age highlights the importance of access to education at different stages of life. The table shows that there are no illiterate individuals below the age of 18, indicating efforts to provide basic education to children. This reflects a positive step towards ensuring early access to education, which is crucial for children's development and future opportunities. The disparities in educational attainment across age groups demonstrate potential barriers to accessing higher education for older individuals.

The percentage of individuals with higher education is highest in the 18-40 age category (28.1%), indicating that younger adults have better access to and opportunities for pursuing advanced education. In contrast, the percentage of individuals with SSLC education is highest in the 41-60 age category (32.4%), suggesting that older individuals face challenges or limited opportunities for higher education. The chi-square result (Value = 101.512, df = 12, p = 0.000) underscores the statistical significance of the relationship between age and education status. This indicates that the observed distribution of individuals across education categories is unlikely to have occurred by chance. It emphasizes the need to recognize the impact of age on educational attainment and develop targeted strategies to address barriers and promote equitable access to education across all age groups. The table also sheds light on lifelong learning patterns. The presence of individuals with higher education in the 61-80 age category (27.3%) indicates a demand and access to educational programs for continuous learning and skill development. This highlights the importance of providing educational opportunities beyond the traditional school years, as individuals continue to seek knowledge and enhance their skills throughout their lives.

Table 4.19

Marital Status and Education Status

Education		Marital Status				Total
		Married	Separated	Single	Widow	
Illiterate	N	23	0	1	4	28
	%	7.6	0.0	1.4	44.4	7.3
Up to SSLC	N	35	2	3	1	41
	%	11.6	28.6	4.3	11.1	10.6
SSLC	N	85	3	18	3	109
	%	28.2	42.9	26.1	33.3	28.2
+2	N	87	1	36	0	124
	%	28.9	14.3	52.2	0.0	32.1
Higher Education	N	71	1	11	1	84
	%	23.6	14.3	15.9	11.1	21.8
Total	N	301	7	69	9	386
	%	100.0	100.0	100.0	100.0	100.0
Chi-Square Result		Value= 42.006, df=12, p=0.000				

Source: Primary Survey, 2023

Table 4.19 displays information on marital status and education status, offering insights into the relationship between these two variables. The table presents different education categories, marital status groups, and their respective counts (N) and percentages (%). It also includes a chi-square result, indicating the statistical significance of the relationship between marital status and education status. Analysing this table helps us understand how marital status may impact access to education. The table highlights the distribution of individuals across education categories based on their marital status. It reveals patterns in educational attainment within different marital status groups. Among married individuals, the highest number and percentage of individuals are in the SSLC category, indicating that being married may have influenced their educational attainment to some extent. The percentages in the table show the proportion of individuals within each education category and marital status group. It reveals certain trends and disparities. The highest percentage of illiterate individuals is found among widows (44.4%), suggesting potential challenges faced by widowed individuals in accessing education. On the other hand, the highest percentage of individuals with higher education is found among single individuals (52.2%), indicating relatively better access to educational opportunities for those who are unmarried. The chi-square result (Value = 42.006, df = 12, p = 0.000) indicates a statistically significant relationship between marital status and education status. This suggests that the observed distribution of individuals across education categories and marital status groups is unlikely to have occurred by chance. The significant relationship signifies the importance of considering marital status when examining access to education and its impact on educational attainment.

Table 4.20

Religion and Education Status

Education		Religion			Total
		Christian	Hindu	Muslim	
Illiterate	N	0	20	8	28
	%	0.0	15.3	3.3	7.3
Up to SSLC	N	2	14	25	41
	%	16.7	10.7	10.3	10.6
SSLC	N	2	34	73	109
	%	16.7	26.0	30.0	28.2
+2	N	4	29	91	124
	%	33.3	22.1	37.4	32.1
Higher Education	N	4	34	46	84
	%	33.3	26.0	18.9	21.8
Total	N	12	131	243	386
	%	100.0	100.0	100.0	100.0
Chi-Square Result		Value= 28.163, df=8, p=0.000			

Source: Primary Survey, 2023

Table 4.20 illustrates the distribution of individuals across education categories based on their religious affiliation. It reveals patterns in educational attainment within different religious groups. Among Christians, the majority of individuals fall into the "+2" and higher education categories, suggesting relatively higher access to advanced education within this religious group. The highest percentage of illiterate individuals is found among Hindus (15.3%), indicating potential challenges faced by individuals from this religious group in accessing education. On the other hand, the highest percentage of individuals with higher education is found among Christians (33.3%), indicating relatively better access to educational opportunities within the Christians community. The chi-square result (Value = 28.163, df = 8, p = 0.000) indicates a statistically significant relationship between religion and education status. This suggests that the observed distribution of individuals across education categories and religious groups is unlikely to have occurred by chance. The significant relationship emphasizes the importance of considering religion when examining access to education and its impact on educational attainment.

Table 4.21

Caste and Education Status

Education		Caste					Total
		EWS	General	OBC	SC	ST	
Illiterate	N	0	3	22	3	0	28
	%	0.0	15.8	7.7	4.5	0.0	7.3
Upto SSLC	N	0	2	31	6	2	41
	%	0.0	10.5	10.8	9.0	15.4	10.6
SSLC	N	0	2	77	24	6	109
	%	0.0	10.5	26.9	35.8	46.2	28.2
+2	N	1	4	97	18	4	124
	%	100.0	21.1	33.9	26.9	30.8	32.1
Higher Education	N	0	8	59	16	1	84
	%	0.0	42.1	20.6	23.9	7.7	21.8
Total	N	1	19	286	67	13	386
	%	100.0	100.0	100.0	100.0	100.0	100.0
Chi-Square Result		Value= 15.321, df=16, p=0.042					

Source: Primary Survey, 2023

Table 4.21 provides insights into the relationship between caste and education status. It highlights disparities in educational attainment across different caste groups and underscores the importance of promoting equal access to education for individuals from marginalized communities. The table showcases the distribution of individuals across education categories based on their caste affiliation. It reveals patterns in educational attainment within different caste groups. Among individuals in the "+2" education category, the majority belong to the EWS caste, suggesting a higher proportion of individuals from economically weaker sections pursuing higher education. The highest percentage of illiterate individuals is found among the OBC caste (7.7%), indicating potential challenges faced by individuals from this caste group in accessing education. On the other hand, the highest percentage of individuals with higher education is found among the General caste (42.1%), suggesting relatively better access to educational opportunities within this caste category. The chi-square result (Value= 15.321, df=16, p=0.042) indicates that there

is statistically significant relationship between caste and education status. This suggests that there are disparities among the all the castes to access education.

Table 4.22

Nature of Family and Education Status

Education		Nature of Family		Total
		Joint	Nuclear	
Illiterate	N	4	24	28
	%	3.3	9.0	7.3
Up to SSLC	N	10	31	41
	%	8.3	11.7	10.6
SSLC	N	42	67	109
	%	35.0	25.2	28.2
+2	N	42	82	124
	%	35.0	30.8	32.1
Higher Education	N	22	62	84
	%	18.3	23.3	21.8
Total	N	120	266	386
	%	100.0	100.0	100.0
Chi-Square Result		Value= 8.757, df=4, p=0.067		

Source: Primary Survey, 2023

Table 4.22 showcases the distribution of individuals across education categories based on the nature of their family structure. It highlights the need for a comprehensive understanding of the interplay between family dynamics and educational outcomes, emphasizing the importance of inclusive educational policies and targeted interventions to ensure equal opportunities for all individuals, regardless of their family structure. The table indicates slight differences in educational attainment between joint and nuclear families. However, the disparities are not significant. A higher percentage of illiterate individuals is found in joint families (9.0%) compared to nuclear families (7.3%), suggesting potential challenges or limitations faced by individuals in joint family settings in accessing education. However, the differences in educational attainment across family types are not substantial. The chi-square result (Value = 8.757, df = 4, p = 0.067) suggests that the relationship between the nature of the family and education status is not statistically significant at the conventional significance level ($p < 0.05$). This means that the observed distribution of individuals across education categories and the nature of the family could have occurred by chance.

Table 4.23

Type of Ration Card and Education Status

Education		Type of Ration Card		Total
		APL	BPL	
Illiterate	N	24	4	28
	%	9.3	3.1	7.3
Up to SSLC	N	27	14	41
	%	10.5	10.9	10.6
SSLC	N	61	48	109
	%	23.7	37.2	28.2
+2	N	80	44	124
	%	31.1	34.1	32.1
Higher Education	N	65	19	84
	%	25.3	14.7	21.8
Total	N	257	129	386
	%	100.0	100.0	100.0
Chi-Square Result		Value= 14.780, df=4, p=0.005		

Source: Primary Survey, 2023

Table 4.23 presents data on the relationship between the types of ration card individuals possess (APL or BPL) and their education status. This table is relevant to understanding access to education because it explores how different types of ration cards, which often reflect socioeconomic status, are associated with educational attainment. From the table can observe patterns related to access to education. In higher education (the last row), individuals with an APL ration card comprise a larger percentage (25.3%) compared to those with a BPL ration card (14.7%). This indicates that individuals from higher socioeconomic backgrounds are more likely to pursue higher education, potentially due to better access to educational resources and opportunities. The chi-square result (Value = 14.780, df = 4, p = 0.005) suggests a statistically significant association between ration card type and education status. This indicates that the observed distribution of individuals across education categories and ration card types is unlikely to be a random occurrence. Table 5.23 provides valuable insights into the connection between access to education and the type of ration card individuals possess. It highlights disparities in educational attainment based on socioeconomic status, with individuals from lower

socioeconomic backgrounds, as indicated by their BPL ration card, facing greater challenges in accessing education.

Table 4.24

Gender and Education Status

Education		Gender		Total
		Female	Male	
Illiterate	N	6	22	28
	%	14.0	6.4	7.3
Up to SSLC	N	10	31	41
	%	23.3	9.0	10.6
SSLC	N	8	101	109
	%	18.6	29.4	28.2
+2	N	15	109	124
	%	34.9	31.8	32.1
Higher Education	N	4	80	84
	%	9.3	23.3	21.8
Total	N	43	343	386
	%	100.0	100.0	100.0
Chi-Square Result		Value= 15.423, df=4, p=0.004		

Source: Primary Survey, 2023

Table 4.24 explores the relationship between gender and education status, shedding light on the access to education for both females and males. Understanding this table can provide insights into the educational opportunities and disparities experienced by different genders. Starting with the illiterate category, the table shows that out of a total of 28 individuals who are illiterate, 6 are female and 22 are male. This indicates that illiteracy is more prevalent among males in this survey. Moving on to individuals with education up to the Secondary School Leaving Certificate (SSLC) level, there are 41 individuals in total, with 10 females and 31 males. This suggests that a higher proportion of males have completed education up to SSLC compared to females. The SSLC category represents those who have completed this level of education, and the data shows that out of 109 individuals, 8 are females and 101 are males. This indicates a higher representation of males in terms of SSLC completion.

Regarding higher education, the table reveals that out of 124 individuals, 15 are females and 109 are males. It appears that a larger percentage of females have

pursued higher secondary education compared to the previous categories, narrowing the gender gap in this educational level. Lastly, the table presents data on individuals who have pursued education beyond higher secondary. Out of a total of 84 individuals, 4 are females and 80 are males. This indicates that males are more predominant in pursuing higher education in this survey. The table's chi-square result of 15.423, with 4 degrees of freedom and a p-value of 0.004, suggests a statistically significant association between gender and education status. The chi-square test indicates that there is a relationship between gender and access to education based on the data collected in the survey. Overall, the table provides insights into the disparities in access to education based on gender. The data suggests that there may be variations in educational opportunities and outcomes between females and males in this particular survey. These findings underscore the importance of addressing gender-related barriers and promoting equal access to education for all individuals.

Table 4.25

Place of Residence and Education Status

Education		**Place of Residence**			**Total**
		Rural	**Semi urban**	**Urban**	
Illiterate	N	8	0	20	28
	%	2.5	0.0	30.3	7.3
Up to SSLC	N	33	1	7	41
	%	10.4	25.0	10.6	10.6
SSLC	N	99	1	9	109
	%	31.3	25.0	13.6	28.2
+2	N	111	2	11	124
	%	35.1	50.0	16.7	32.1
Higher Education	N	65	0	19	84
	%	20.6	0.0	28.8	21.8
Total	N	316	4	66	386
	%	100.0	100.0	100.0	100.0
Chi-Square Result		Value= 73.965, df=8, p=0.000			

Source: Primary Survey, 2023

Table 4.25 presents data on the relationship between place of residence and education status, shedding light on access to education based on different types of residential areas. Looking at the illiterate category, the table shows that out of a total of 28 individuals who are illiterate, 8 reside in rural areas, none in semi-urban areas, and 20 in urban areas. This indicates that a higher proportion of illiterate individuals are found in urban areas compared to rural or semi-urban areas. Moving on to individuals with education up to the Secondary School Leaving Certificate (SSLC) level, there are 41 individuals in total. Out of these, 33 reside in rural areas, 1 in semi-urban areas, and 7 in urban areas. This suggests that a larger proportion of individuals with education up to SSLC are found in rural areas. The SSLC category represents those who have completed this level of education. The data shows that out of 109 individuals, 99 reside in rural areas, 1 in semi-urban areas, and 9 in urban areas. This indicates a higher representation of individuals who have completed SSLC in rural areas compared to semi-urban or urban areas. Regarding higher secondary education, the table reveals that out of 124 individuals, 111 reside in rural areas, 2 in semi-urban areas, and 11 in urban areas. This suggests that a larger percentage of individuals who have completed higher secondary education are found in rural areas, while the proportion is lower in urban areas. In terms of higher education, the data indicates that out of 84 individuals, 65 reside in rural areas, none in semi-urban areas, and 19 in urban areas. This implies that a higher proportion of individuals pursuing higher education are located in rural areas compared to urban areas. The chi-square result of 73.965, with 8 degrees of freedom and a p-value of 0.000, signifies a statistically significant association between place of residence and education status. The chi-square test indicates that there is a relationship between the two variables based on the data collected in the survey. It suggests that individuals in different types of residential areas may face varying levels of educational opportunities and outcomes. These findings highlight the importance of considering geographical factors and tailoring educational policies and interventions to address the specific needs and challenges faced by individuals in different residential areas, particularly in urban settings where a higher percentage of illiterate individuals are observed.

Table 4.26

Income and Education Status

Education	N	Average Income	Std. Deviation	Std. Error
Illiterate	28	32800.000	17060.9365	3224.2139
Up to SSLC	41	17190.244	12400.8025	1936.6800
SSLC	109	27583.486	19789.3748	1895.4783
+2	124	26762.903	23766.9391	2134.3341
Higher Education	84	42905.952	27002.0452	2946.1647
Total	386	29928.756	23308.9053	1186.3920
ANOVA	F(4,381)=11.694, p=0.000			

Source: Primary Survey, 2023

Table 4.26 illustrates the connection between income and education status, offering insights into the relationship between access to education and financial outcomes. Looking at the average income values, it is evident that higher levels of education are generally associated with higher incomes. For instance, individuals with higher education have the highest mean income of 42,905.952, while illiterate individuals have the lowest mean income of 32,800.000. This suggests that education plays a significant role in enhancing income levels, with individuals who have pursued higher education experiencing greater financial benefits. The standard deviation values indicate the variability or dispersion of income within each education category. In other words, they reflect the degree of income diversity within a particular education group. For example, the standard deviation for higher education is 27,002.0452, which is relatively higher compared to other categories. This suggests that there is a wider range of income levels among individuals with higher education, indicating that educational attainment alone may not guarantee uniform income outcomes. The ANOVA test conducted on the data assesses the statistical significance of the differences in mean income across the education categories. The result shows an F-statistic of 11.694 and a p-value of 0.000, indicating a significant relationship between education status and income. This implies that education has a notable impact on income disparities, highlighting the potential benefits of increased access to education for improving financial outcomes. Overall, the table underscores

the importance of education as a means to access higher income levels. It suggests that individuals who have attained higher levels of education tend to enjoy higher mean incomes. However, it is important to note that the table does not provide information on the specific factors influencing the observed income disparities, such as job opportunities or socioeconomic context. Nonetheless, the data emphasizes the significance of providing equitable access to education, as it can contribute to reducing income inequalities and promoting socioeconomic advancement for individuals and communities

Table 4.27

Multinomial Logistic Regression of Access to Education

Model Fitting Information							
Model	**Model Fitting Criteria**	**Likelihood Ratio Tests**					
	-2 Log Likelihood	**Chi-Square**		**Df**		**Sig.**	
Intercept Only	1131.393						
Final	907.484	223.910		40		.000	
Pseudo R-Square							
Cox and Snell		.442					
Nagelkerke		.466					
McFadden		.197					
Goodness-of-Fit							
	Chi-Square	Df				Sig.	
Pearson	1497.470	1444				.160	
Deviance	901.938	1444				1.000	
Parameter Estimates							
Illiterate	Educational qualification of the head[a]	B	Std. Error	Wald	Df	Sig.	Exp(B)
	Intercept	-22.642	1.870	146.668	1	.000	
	Age of the respondent	.151	.029	27.486	1	**.000**	1.163
	Total expenditure	.233	.000	10.271	1	**.001**	1.000
	Nr-family-Single	3.319	1.802	3.391	1	**.066**	27.635
	Nr-family-Nuclear	.165	.760	.047	1	.828	1.180
	Nr-family-Joint	0[b]		.	0	.	.

	Religion-Muslim	17.941	.766	548.893	1	**.000**	61900582.672
	Religion-Hindu	18.181	.000	.	1	.	78710850.225
	Religion-Christen	0[b]		.	0	.	.
	Ration card type - APL	-.775	.997	.605	1	.437	.461
	Place of reside-Urban	0[b]	.	.	0	.	.
	Place of reside-Semiurban	.501	.794	.398	1	.528	1.651
	Place of reside-Rural	-.913	10029.253	.000	1	1.000	.401
	Gender-Male	0[b]		.	0	.	.
	Gender-Female	-1.641	.934	3.086	1	**.079**	.194
	Place of reside-Urban	0[b]	.	.	0	.	.
Up to SSLC	Intercept	-3.103	1.495	4.308	1	.038	
	Age of the respondent	.105	.021	24.717	1	**.000**	
	Total expenditure	.421	.000	12.687	1	**.000**	1.111
	Nr-family-Single	2.105	1.432	2.160	1	.142	1.000
	Nr-family-Nuclear	-.216	.502	.185	1	.667	8.207
	Nr-family-Joint	0[b]	.	.	0	.	.806
	Religion-Muslim	1.059	1.114	.904	1	.342	.
	Religion-Hindu	.366	1.219	.090	1	.764	2.883
	Religion - Christen	0[b]	.	.	0	.	1.442
	Ration card type-APL	.811	.580	1.957	1	.162	.
	Ration card type-BPL	0[b]	.	.	0	.	2.250
	Place of reside-Urban	-.987	.685	2.075	1	.150	.
	Place of reside-	17.171	6898.529	.000	1	.998	.373

	Semiurban						
	Place of reside-Rural	0[b]	.	.	0	.	28670667.547
	Gender-Male	-1.085	.725	2.239	1	.135	.
	Gender-Female	0[b]	.	.	0	.	.338
SSLC	Intercept	-1.656	1.235	1.798	1	.180	
	Age of the respondent	.050	.016	9.330	1	**.002**	1.051
	Total expenditure	.543	.000	4.817	1	**.028**	1.000
	Nr-family-Single	.683	1.336	.262	1	.609	1.980
	Nr-family-Nuclear	-.594	.350	2.889	1	**.089**	.552
	Nr-family-Joint	0[b]	.	.	0	.	.
	Religion-Muslim	1.525	.935	2.658	1	.103	4.594
	Religion-Hindu	.439	.990	.197	1	.657	1.551
	Religion-Christen	0[b]	.	.	0	.	.
	Ration card type - APL	1.456	.427	11.637	1	**.001**	4.289
	Ration card type-BPL	0[b]	.	.	0	.	.
	Place of reside-Urban	-.782	.503	2.418	1	.120	.457
	Place of reside-Semiurban	17.367	6898.529	.000	1	.998	34876044.834
	Place of reside-Rural	0[b]	.	.	0	.	.
	Gender-Male	-.390	.656	.353	1	.552	.677
	Gender-Female	0[b]	.	.	0	.	.782.
Plus Two	Intercept	2.078	1.078	3.715	1	.054	
	Age of the respondent	-.039	.017	5.604	1	**.018**	
	Total expenditure	.329	.000	.462	1	.497	.961
	Nr-family-Single	-.434	1.492	.085	1	.771	1.000
	Nr-family-	-.073	.341	.046	1	.830	.648

	Nuclear						
	Nr-family-Joint	0[b]	.	.	0	.	.930
	Religion-Muslim	.510	.764	.445	1	.505	.
	Religion-Hindu	-.737	.835	.780	1	.377	1.665
	Religion-Christen	0[b]	.	.	0	.	.478
	Ration card type – APL	1.149	.420	7.491	1	**.006**	.
	Ration card type – BPL	0[b]	.	.	0	.	3.154
	Place of reside-Urban	-.395	.491	.647	1	.421	.
	Place of reside-Semiurban	18.506	6898.529	.000	1	.998	.674
	Place of reside-Rural	0[b]	.	.	0	.	108947442.395
	Gender-Male	-.620	.609	1.038	1	.308	.
	Gender-Female	0[b]	.	.	0	.	.538

a. The reference category is: Higher Education.
b. Floating point overflow occurred while computing this statistic. Its value is therefore set to system missing.
c. This parameter is set to zero because it is redundant.
Source: Primary Survey, 2023

Model Summary:

Table 4.27 presents the results of a multinomial logistic regression analysis examining the relationship between access to education and various predictor variables. The model fitting information indicates that the final model has a better fit compared to the intercept-only model, as evidenced by a significant decrease in the -2 Log Likelihood and a significant chi-square value. The pseudo-R-squared values (Cox and Snell, Nagelkerke, and McFadden) provide an assessment of the model's goodness of fit, with values ranging from 0 to 1. These values indicate the proportion of variance explained by the model, and higher values indicate a better fit. In this case, the pseudo R-squared values suggest a moderate level of fit for the

model. The parameter estimates section presents the coefficients, standard errors, Wald statistics, degrees of freedom, and significance levels for each predictor variable in the model. Pearson and Deviance Chi-Square Tests Measure the difference between observed and predicted values. Higher p-values (>0.05) suggest a good fit. The reference category for the educational qualification of the head variable is Higher Education. The parameter estimates show the impact of each predictor variable on the log-odds of belonging to a particular education category compared to the reference category (Higher Education). For example, in the illiterate category, the age of the respondent, total expenditure, place of residence, religion, ration card, place of residence, nature of the family, religion, type of ration card and gender variables are included as predictors. The coefficient values indicate the direction and magnitude of the relationship, while the significance levels determine the statistical significance of the relationship.

Let's take a closer look at the parameter estimates for the illiterate category as an example:

1. **Illiterate (Reference Category: Higher Education):**

- Intercept: The log-odds of being in the Illiterate category (compared to Higher Education) is -22.642 when all other predictor variables are zero. This extremely low log-odds value suggests a very low likelihood of being illiterate compared to having higher education. The negative sign indicates a lower likelihood compared to the reference category.

- Age: For illiterate individuals, with each one-unit increase in age, the odds of being in a lower educational category (Up to SSLC, SSLC, or Plus Two) increase by a factor of 1.163.

- Total Expenditure: Total expenditure doesn't significantly affect the educational level for illiterate individuals.

- Family Structure (Single): Illiterate individuals from single-member families are significantly more likely to be in lower educational categories.

- Religion (Muslim and Hindu): Illiterate Muslims and Hindus are more likely to have lower educational levels compared to higher education.
- Place of Residence (Semi Urban): Illiterate individuals residing in semi-urban areas are more likely to be in lower educational categories.
- Gender (Female): Illiterate females are less likely to pursue higher education compared to males.

2. **Up to SSLC:**

- Intercept: The log-odds of having education up to SSLC (compared to Higher Education) is -3.103 when all other predictor variables are zero. This negative log-odds value suggests a lower likelihood of having education up to SSLC compared to having higher education. While it's not as extreme as the Illiterate category, it still indicates a lower likelihood.
- Age: With each one-unit increase in age, the odds of being in the Up to SSLC category increase by a factor of 1.111.
- Family Structure (Single, Nuclear): Family structure does not significantly influence the educational level at SSLC.
- Religion (Muslim): Being Muslim increases the odds of being in the up to SSLC category by a factor of 8.207 compared to higher education.
- Place of Residence (Semi Urban, Rural): Living in semi-urban areas significantly increases the likelihood of being in the Up to SSLC category.

3. **SSLC:**

- Intercept: The log-odds of having education until SSLC (compared to Higher Education) is -1.656 when all other predictor variables are zero. This negative log-odds value suggests a lower likelihood of having education until SSLC compared to having higher education, although the likelihood is higher than the Illiterate and Up to SSLC categories.

- Age: With each one-unit increase in age, the odds of being in the SSLC category increase by a factor of 1.051.
- Family Structure (Single): Family structure does not significantly affect the educational level at SSLC.
- Religion (Muslim): Being Muslim increases the odds of being in the SSLC category by a factor of 4.594 compared to higher education.
- Place of Residence (Urban, Semi Urban): Living in semi-urban areas significantly increases the likelihood of being in the SSLC category

4. **Plus two:**

- Intercept: The log-odds of having education until Plus Two (compared to Higher Education) is 2.078 when all other predictor variables are zero. This positive log-odds value suggests a higher likelihood of having education until Plus Two compared to having higher education. The positive sign indicates a higher likelihood compared to the reference category.
- Age: With each one-unit increase in age, the odds of being in the Plus Two category decrease by a factor of 0.961.
- Ration Card Type (APL): Having an APL ration card significantly increases the odds of being in the Plus Two category by a factor of 4.289 compared to higher education.
- Place of Residence (Semi Urban): Living in semi-urban areas significantly increases the likelihood of being in the Plus Two category.

Table 4.28

Status of Scholarships Received during the Study Period

Variable			Scholarship		Total	Chi-Square value (df)
			No	Yes		
Place of residence	Rural	N	277	39	316	1.748 (2) P=0.417
		%	81.0	88.6	81.9	
	Semi urban	N	4	0	4	
		%	1.2	0.0	1.0	
	Urban	N	61	5	66	
		%	17.8	11.4	17.1	
Gender	Female	N	41	2	43	2.182 (1) P=0.140
		%	12.0	4.5	11.1	
	Male	N	301	42	343	
		%	88.0	95.5	88.9	
Educational qualification	Illiterate	N	27	1	28	36.510 (4) P=0.000
		%	7.9	2.3	7.3	
	Up to SSLC	N	41	0	41	
		%	12.0	0.0	10.6	
	SSLC	N	104	5	109	
		%	30.4	11.4	28.2	
	+2	N	110	14	124	
		%	32.2	31.8	32.1	
	Higher Education	N	60	24	84	
		%	17.5	54.5	21.8	
Religion	Christian	N	12	0	12	12.288 (2) P=0.002
		%	3.5	0.0	3.1	
	Hindu	N	106	25	131	
		%	31.0	56.8	33.9	
	Muslim	N	224	19	243	
		%	65.5	43.2	63.0	
Total		N	342	44	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.28 provides information on the status of scholarships received during the study period, broken down by different variables. The table also includes the chi-

square values and associated p-values to test the independence between the variables.

- Place of residence: The table shows the distribution of scholarships by place of residence. Most individuals in both rural and urban areas did not receive scholarships, with 277 (81.0%) rural residents and 61 (17.8%) urban residents reporting no scholarships. In semi-urban areas, all four respondents did not receive any scholarships. The chi-square test result of 1.748 with 2 degrees of freedom (df) and a p-value of 0.417 indicates that there is no significant association between place of residence and receiving scholarships.

- Gender: The table presents the distribution of scholarships by gender. Among females, 41 (12.0%) did not receive scholarships, while 2 (4.5%) received scholarships. Among males, 301 (88.0%) did not receive scholarships, while 42 (95.5%) received scholarships. The chi-square test result of 2.182 with 1 df and a p-value of 0.140 suggests that there is no significant association between gender and receiving scholarships.

- Educational qualification: The table displays the distribution of scholarships by educational qualification. The highest percentage of individuals not receiving scholarships was observed among those who are illiterate, with 27 (7.9%) reporting no scholarships. The chi-square test result of 36.510 with 4 df and a p-value of 0.000 indicates a significant association between educational qualification and receiving scholarships.

- Religion: The table presents the distribution of scholarships by religion. Among Christians, 12 (3.5%) did not receive scholarships, while none of them received scholarships. Among Hindus, 106 (31.0%) did not receive scholarships, while 25 (56.8%) received scholarships. Among Muslims, 224 (65.5%) did not receive scholarships, while 19 (43.2%) received scholarships. The chi-square test result of 12.288 with 2 df and a p-value of 0.002 suggests a significant association between religion and receiving scholarships.

Overall, the table provides insights into the distribution of scholarships based on place of residence, gender, educational qualification, and religion. The chi-square test results help to determine the independence between these variables and the receipt of scholarships.

Table 4.29

Result of Competitive Examinations

Variable			Result		Total	Chi-Square value (df)
			Not Qualified	Qualified		
Place of residence	Rural	N	174	142	316	9.756 (2) P=0.008
		%	77.0	88.8	81.9	
	Semi urban	N	2	2	4	
		%	0.9	1.3	1.0	
	Urban	N	50	16	66	
		%	22.1	10.0	17.1	
Gender	Female	N	36	7	43	12.634 (1) P=0.000
		%	15.9	4.4	11.1	
	Male	N	190	153	343	
		%	84.1	95.6	88.9	
Educational qualification	Illiterate	N	24	4	28	27.700 (4) P=0.000
		%	10.6	2.5	7.3	
	Up to SSLC	N	30	11	41	
		%	13.3	6.9	10.6	
	SSLC	N	62	47	109	
		%	27.4	29.4	28.2	
	+2	N	78	46	124	
		%	34.5	28.8	32.1	
	Higher Education	N	32	52	84	
		%	14.2	32.5	21.8	
Religion	Christian	N	3	9	12	6.212 (2) P=0.045
		%	1.3	5.6	3.1	
	Hindu	N	75	56	131	
		%	33.2	35.0	33.9	
	Muslim	N	148	95	243	
		%	65.5	59.4	63.0	
Total		N	226	160	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.29 provides information on the results of competitive examinations, categorized by different variables.

- Place of residence: The table shows the distribution of examination results by place of residence. Among rural residents, 174 (77.0%) did not qualify the competitive examinations, while 142 (88.8%) qualified. In semi-urban areas, 2 (0.9%) did not qualify, and 2 (1.3%) qualified. In urban areas, 50 (22.1%) did not qualify, and 16 (10.0%) qualified. The chi-square test result of 9.756 with 2 degrees of freedom (df) and a p-value of 0.008 indicates a significant association between place of residence and examination results.

- Gender: The table presents the distribution of examination results by gender. Among females, 36 (15.9%) did not qualify the examinations, while 7 (4.4%) qualified. Among males, 190 (84.1%) did not qualify, while 153 (95.6%) qualified. The chi-square test result of 12.634 with 1 df and a p-value of 0.000 suggests a significant association between gender and examination results.

- Educational qualification: The table displays the distribution of examination results by educational qualification. Among illiterate individuals, 24 (10.6%) did not qualify the examinations, while 4 (2.5%) qualified. Among those with up to SSLC qualification, 30 (13.3%) did not qualify, and 11 (6.9%) qualified. Among those with an SSLC qualification, 62 (27.4%) did not qualify, and 47 (29.4%) qualified. Among those with a +2 qualification, 78 (34.5%) did not qualify, and 46 (28.8%) qualified. Among those with higher education, 32 (14.2%) did not qualify, and 52 (32.5%) qualified. The chi-square test result of 27.700 with 4 df and a p-value of 0.000 indicates a significant association between educational qualification and examination results.

- Religion: The table presents the distribution of examination results by religion. Among Christians, 3 (1.3%) did not qualify the examinations, while 9 (5.6%) qualified. Among Hindus, 75 (33.2%) did not qualify, and 56

(35.0%) qualified. Among Muslims, 148 (65.5%) did not qualify, and 95 (59.4%) qualified. The chi-square test result of 6.212 with 2 df and a p-value of 0.045 suggests a significant association between religion and examination results.

Looking at the variable of place of residence, the table reveals that rural areas have a higher proportion of individuals who did not qualify the examinations compared to semi-urban and urban areas. This suggests that individuals residing in rural areas may face challenges in accessing quality education or may have limited resources for exam preparation, leading to lower success rates in competitive exams. Furthermore, the table highlights a significant association between gender and examination results. Females have a lower proportion of qualified candidates compared to males. This finding may indicate gender-based disparities in educational opportunities, such as limited access to quality education, cultural barriers, or societal expectations that impact female students' performance in competitive exams. Educational qualification also plays a crucial role in examination results. The table demonstrates that individuals with higher educational qualifications, such as higher education degrees, tend to have higher success rates in competitive exams. On the other hand, those with lower qualifications or who are illiterate face greater challenges in qualifying the exams. This suggests that individuals with higher educational qualifications may have received better educational opportunities, which equipped them with the necessary knowledge and skills for success in competitive exams. Religion is another factor associated with examination results. The table indicates that Christians have a higher proportion of qualified candidates compared to Muslims and Hindus. This finding could be attributed to varying levels of access to education based on religious affiliation, cultural factors influencing educational attainment, or socio-economic disparities associated with different religious communities. In summary, the table provides insights into the relationship between access to education and examination results. It suggests that individuals from rural areas, females, those with lower educational qualifications, and individuals from certain religious backgrounds may face barriers in accessing quality education, which subsequently affects their performance in

competitive exams. These findings highlight the need for targeted interventions and policies to address educational inequalities, improve access to quality education for marginalized groups, and create equal opportunities for all individuals to succeed in their academic pursuits.

Table 4.30

Average Percent of Mark

Variable		N	Average Percent Mark	Std. Deviation	Std. Error	ANOVA/ t-test
Place	Rural	278	56.9964	19.1102	1.14616	F(2,316)=1.125 p=0.326
	Semi urban	3	66.0000	5.29150	3.05505	
	Urban	38	61.5895	27.3295	4.43343	
Gender	Female	29	47.8052	21.6918	4.02806	t (317)=-2.775, p=0.006
	Male	290	58.6105	19.8190	1.16381	

Source: Primary Survey, 2023

Table 4.30 provides information on the average percent of marks obtained by individuals, along with relevant statistical measures and ANOVA/t-test results. The table examines the average marks based on two variables: place (rural, semi-urban, urban) and gender (female, male). Starting with the variable of place, the table shows that individuals from rural areas have an average percent mark of 56.9964, with a standard deviation of 19.1102. The standard error indicates the precision of the estimate. The ANOVA test compares the means of the three groups (rural, semi-urban, and urban) and determines if there are statistically significant differences. In this case, the ANOVA test yields an F-value of 1.125, with a p-value of 0.326, suggesting that there is no significant difference in the average percent marks among the three places. Moving to the gender variable, the table reveals that females have an average percent mark of 47.8052, with a standard deviation of 21.6918. On the other hand, males have a higher average percent mark of 58.6105, with a standard deviation of 19.8190. To assess the statistical significance of this difference, a t-test is conducted. The t-test result shows a t-value of -2.775, with a p-value of 0.006. This indicates that there is a significant difference in the average percent marks between females and males, suggesting that gender may have an influence on

academic performance. The table provides insights into the average percent of marks based on place and gender. While there are no significant differences in average marks among different places (rural, semi-urban, urban), there is a significant difference in average marks between females and males. These findings contribute to the understanding of the educational landscape and highlight potential disparities in academic performance based on gender. Considering the connection to access to education, these findings suggest that gender may be a factor that affects educational opportunities and outcomes. The lower average marks among females could potentially reflect disparities in access to quality education, social barriers, or gender-related biases in the education system. These results emphasize the importance of addressing gender inequalities in access to education and ensuring equal opportunities for academic success among all genders.

Table 4.31

Occupation and Educational Qualification

Occupation		Educational Qualification of the Head					Total
		Illiterate	Up to SSLC	SSLC	+2	Higher Education	
Casual labour	N	1	8	17	13	0	39
	%	3.6	19.5	15.6	10.5	0.0	10.1
Domestic servant	N	0	0	1	2	0	3
	%	0.0	0.0	0.9	1.6	0.0	0.8
Government	N	0	0	6	3	16	25
	%	0.0	0.0	5.5	2.4	19.0	6.5
No job	N	13	23	42	32	9	119
	%	46.4	56.1	38.5	25.8	10.7	30.8
Private	N	2	0	13	17	28	60
	%	7.1	0.0	11.9	13.7	33.3	15.5
Professional	N	0	0	2	3	7	12
	%	0.0	0.0	1.8	2.4	8.3	3.1
Self employed	N	12	9	18	18	10	67
	%	42.9	22.0	16.5	14.5	11.9	17.4
Student	N	0	1	10	36	14	61
	%	0.0	2.4	9.2	29.0	16.7	15.8
Total	N	28	41	109	124	84	386
	%	100.0	100.0	100.0	100.0	100.0	100.0
Chi-Square		Value= 147.099, df=28, p=0.000					

Source: Primary Survey, 2023

Table 4.31 provides information on the occupation of individuals categorized by their educational qualifications. The table aims to analyse the relationship between occupation and the educational qualifications of the head of the household. The occupations listed in the table include casual labour, domestic servant, government employee, unemployed, private sector employee, professional, self-employed, and student. The educational qualifications of the head of the household are categorized into five levels: illiterate, up to SSLC (Secondary School Leaving Certificate), SSLC, +2 (higher secondary education), and higher education. Looking at the data, we can observe the distribution of individuals across different occupations and educational qualification levels. For example, in the category of casual labour, 3.6% of individuals are illiterate, 19.5% have an education level up to SSLC, 15.6% have completed SSLC, 10.5% have completed +2 education, and no individuals in this category have a higher education qualification. Similarly, we can examine the distribution for each occupation and educational qualification level. The percentages indicate the proportion of individuals within each category. For instance, among government employees, 5.5% have an education level up to SSLC, 2.4% have completed SSLC, 19% have completed +2 education, and 6.5% have a higher education qualification. The total column provides the overall count and percentage of individuals in each educational qualification category across all occupations. It shows that among the surveyed individuals, 7.3% are illiterate, 10.6% have an education level up to SSLC, 28.2% have completed SSLC, 32.1% have completed +2 education, and 21.8% have a higher education qualification. To assess the relationship between occupation and educational qualification, a chi-square test is conducted, yielding a chi-square value of 147.099 with 28 degrees of freedom (df) and a p-value of 0.000. This significant result indicates that there is a strong association between occupation and the educational qualifications of the household head. In conclusion, the table reveals the distribution of individuals across different occupations and educational qualification levels. It highlights the varying educational backgrounds among individuals engaged in different occupations. The significant chi-square result suggests that the occupation of an individual is closely related to the educational qualifications of the head of the household.

Table 4.32

Achievements and Extracurricular Activities during Education

Achievements/ Extracurricular Activities		Frequency	Percent
Achievements	No achievements	205	53.1
	Academic achievements	100	25.9
	Arts	33	8.5
	Others	18	4.7
	Sports	30	7.8
Extracurricular Activities	No Activities	289	74.9
	Had Activities	97	25.1
Total		386	100.0

Source: Primary Survey, 2023

Table 4.32 presents data on the achievements and extracurricular activities of individuals during their education. Regarding achievements, most respondents (53.1%) reported having no achievements during their education. Among those who achieved something, the most common type of achievement was academic achievements, reported by 25.9% of respondents. Arts-related achievements were mentioned by 8.5% of respondents, followed by other types of achievements mentioned by 4.7% of respondents. Sports-related achievements were reported by 7.8% of respondents. When it comes to extracurricular activities, a significant majority (74.9%) of respondents stated that they did not engage in any extracurricular activities during their education. On the other hand, 25.1% of respondents reported participating in extracurricular activities.

The findings from the tables indicate several important insights related to access to education and its association with various factors. Firstly, in terms of the status of scholarships received during the study period, there were no significant differences observed based on the place of residence or gender. However, there was a significant association between educational qualification and the receipt of scholarships, suggesting that higher educational qualifications were more likely to be associated

with receiving scholarships. Secondly, the results of competitive examinations showed that there were significant differences based on the place of residence, gender, and educational qualification. Rural areas had a lower qualification rate compared to semi-urban and urban areas. Males had a higher qualification rate compared to females. Furthermore, individuals with higher educational qualifications were more likely to qualify for competitive examinations. Thirdly, the average percent of marks varied based on the place of residence and gender. However, only the difference based on gender was statistically significant. Females had a lower average percent of marks compared to males. Lastly, the occupation of individuals was found to be associated with their educational qualifications. The distribution of educational qualifications varied across different occupations, indicating that certain occupations required higher levels of educational attainment. This association was statistically significant, suggesting a strong relationship between occupation and educational qualifications.

4.2.3 Standard of Living

The standard of living is a fundamental concept in assessing the well-being and quality of life within a society. It encompasses a range of factors that influence the daily lives and experiences of individuals, from economic prosperity to access to essential services and overall social conditions. As societies evolve and economic progress, understanding and accurately measuring the standard of living become increasingly important for policymakers, researchers, and individuals alike. This section aims to delve into the multifaceted nature of measuring the standard of living. It explores various indicators and metrics that have been developed to quantify and evaluate different aspects of well-being, seeking to provide a comprehensive and nuanced perspective on this complex topic. The first section of the chapter examines economic indicators, with a particular focus on Income.

Table 4.33

Actual Occupation and Aspired Occupation

Actual Occupation		Aspired Occupation					Total
		Business	Government Job	Private Job	Professional Jobs	Self-Employment	
Casual labour	N	7	17	1	7	7	39
	%	7.5	15.7	2.8	6.7	15.6	10.1
Domestic servant	N	0	1	2	0	0	3
	%	0.0	0.9	5.6	0.0	0.0	0.8
Govt.Job	N	1	23	0	1	0	25
	%	1.1	21.3	0.0	1.0	0.0	6.5
No job	N	34	24	9	40	12	119
	%	36.6	22.2	25.0	38.5	26.7	30.8
Private	N	14	19	19	5	3	60
	%	15.1	17.6	52.8	4.8	6.7	15.5
Professional	N	3	1	0	8	0	12
	%	3.2	0.9	0.0	7.7	0.0	3.1
Self employed	N	26	10	4	10	17	67
	%	28.0	9.3	11.1	9.6	37.8	17.4
Student	N	8	13	1	33	6	61
	%	8.6	12.0	2.8	31.7	13.3	15.8
Total	N	93	108	36	104	45	386
	%	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary Survey, 2023

Table 4.33 presents data on the actual occupation and aspired occupation of individuals. This table allows for the examination of the relationship between individuals' current occupations and their aspirations, offering insights into the patterns and preferences within the surveyed population. Under the actual occupation "casual labour," the percentages indicate that 7.5% of individuals aspire to have a business occupation, 15.7% aspire to have a government job, 2.8% aspire to have a private job, 6.7% aspire to have a professional job, and 15.6% aspire to be self-employed. Here are some major observations:

- Aspiration for Professional Jobs: The table shows that a significant number of individuals across various actual occupation categories aspire to have professional jobs. This includes individuals in casual labour, no job, private

job, self-employed, and student categories. This finding suggests a general desire for higher-skilled and specialized occupations, which are often associated with higher incomes and potentially a higher standard of living.

- Aspiration for Government Jobs: The table reveals that a substantial proportion of individuals in the casual labour, no job, and student categories aspire to have government jobs. Government jobs are often seen as providing stability, benefits, and security, which can contribute to a perceived higher standard of living. This finding indicates the attractiveness of government employment for many individuals seeking stable and secure career options.

- Self-employment Aspirations: The table shows that a notable number of individuals in various actual occupation categories aspire to be self-employed. Self-employment can offer flexibility, autonomy, and potentially higher income opportunities. This finding suggests that some individuals see entrepreneurship as a means to improve their standard of living and pursue their career aspirations.

- Discrepancies between Actual and Aspired Occupations: Comparing the actual occupations with the aspired occupations, we can observe disparities. For example, individuals in casual labour, domestic servant, and private job categories aspire to professional jobs, government jobs, and self-employment. This mismatch may indicate dissatisfaction with their current occupations and a desire for upward mobility or a better standard of living.

- Distribution of Aspirations: The table provides insights into the distribution of aspirations across different actual occupation categories. For instance, individuals in the "no job" category have aspirations for various occupations, including professional jobs, private jobs, self-employment, and government jobs. This diversity of aspirations may reflect differing motivations, skills, and interests within the population, impacting their perceptions of the standard of living associated with each occupation.

These findings highlight the aspirations individuals have regarding their occupations and shed light on their expectations for a higher standard of living. They reflect the desire for upward mobility, stability, and increased income potential.

As mentioned in Table 4.2,

- Ration Card Type and Economic Status: The distribution of ration card types provides an indication of the economic status of respondents. The higher proportion of APL ration cardholders (66.6%) suggests that a significant portion of the surveyed population falls above the poverty line, potentially indicating a relatively higher standard of living. Conversely, the presence of BPL ration cardholders (33.4%) implies a lower economic status and a potentially lower standard of living for those individuals.

- Occupation and Standard of Living: The table reveals a diverse range of occupations among respondents. While the majority have occupations such as no job, student, self-employed, casual labour, and domestic servant, there are also individuals employed in private, government, and professional positions. The standard of living can vary significantly across these occupational categories, with individuals in higher-skilled and higher-paying jobs potentially experiencing a higher standard of living compared to those in low-wage or informal work.

- Ownership of Land and Standard of Living: The high percentage (95.6%) of respondents who own land suggests a relatively higher level of wealth accumulation and potential access to agricultural or real estate resources. Land ownership is often associated with economic security and can contribute to a higher standard of living, particularly in rural or agrarian areas where land is a valuable asset.

- Possession of House and Standard of Living: The majority (92.7%) of respondents owning their houses indicates a relatively higher level of stability and potentially better living conditions. Home ownership is often considered a significant factor in determining the standard of living, as it

provides security, control over living space, and potential long-term financial benefits.

- Income Status and Standard of Living: The distribution of income status among respondents reveals varying levels of economic well-being. The majority (50.5%) have an income below 20,000, indicating a lower income bracket and potentially a lower standard of living. Higher income brackets, such as 20,000-40,000 and above 100,000, represent smaller proportions of the surveyed population but indicate a relatively higher economic status and potentially a higher standard of living.

These findings collectively portray a mixed picture of the standard of living among the surveyed population. The presence of individuals with no jobs, possession of BPL ration cards, and lower-income brackets indicates economic challenges and potentially lower standards of living. On the other hand, high levels of land and house ownership reflect aspects of stability and potential wealth accumulation. These findings highlight the complex interplay between various socioeconomic factors and the standard of living.

Based on the findings from the Table 4.3 and 4.4, appear that the households generally have reasonable living standards. Here's an analysis based on the findings:

- Housing Facilities: Most households have attached bathrooms/washrooms and kitchens inside their homes, indicating a level of convenience and privacy in terms of sanitation and food preparation. This suggests that basic housing facilities are met, which contributes to a reasonable living standard.

- Drinking Water: Most households have access to their own well or piped water, ensuring a relatively reliable and clean source of drinking water. Additionally, most respondents reported good or excellent quality of drinking water, indicating that water quality standards are generally met, which is essential for a reasonable living standard.

- Waste Disposal: The presence of waste management practices such as using kitchen gardens and municipal canals signifies an awareness of proper waste disposal. This indicates that households are taking steps to maintain cleanliness and hygiene, which contributes to an improved living standard.

- Cooking Facilities: The prevalence of gas as the primary cooking fuel suggests that households have access to a clean and efficient energy source for cooking, which is important for food preparation and safety. This indicates a reasonable standard of living in terms of cooking facilities.

- Housing Infrastructure: Most houses surveyed are constructed using durable materials such as concrete, tiles, or a combination of both. This suggests that households have access to housing infrastructure that offers safety, durability, and improved living conditions, contributing to a reasonable living standard.

- Household Amenities: The presence of amenities such as electricity, mobile phones, televisions, refrigerators, and washing machines indicates a certain level of convenience and access to modern technologies. These amenities contribute to a reasonable living standard by providing comfort, communication, and basic conveniences.

While these findings indicate a reasonable living standard along with it reflect the level of access to necessities, infrastructure, and modern amenities, which are crucial indicators of the standard of living. The availability of proper housing facilities, access to clean water, waste management practices, and possession of various household amenities contribute to an enhanced quality of life for the surveyed population. It is important to recognize that individual circumstances, regional disparities, and other contextual factors can significantly influence an individual's standard of living, and a comprehensive assessment should consider a broader range

of variables and indicators to capture the multifaceted nature of well-being within a population.

Table 4.34

Place of Residence and Ration Card Type

Ration Card Type		Place of residence			Total
		Rural	Semi urban	Urban	
APL	N	203	2	52	257
	%	64.2	50.0	78.8	66.6
BPL	N	113	2	14	129
	%	35.8	50.0	21.2	33.4
Total	N	316	4	66	386
	%	100.0	100.0	100.0	100.0
Chi-Square (df)		Value=5.692 (2), p=0.058			

Source: Primary Survey, 2023

Table 4.34 presents the connection between the ration card type and the place of residence. The table connecting ration card type and place of residence sheds light on potential regional disparities in standard of living. The distribution of households across different ration card types (APL and BPL) and places of residence (rural, semi-urban, and urban) provides valuable insights into socio-economic dynamics. The findings reveal that a significant number of households with APL ration cards are located in rural areas, comprising the majority (64.2%) of such households. This suggests that a substantial portion of households above the poverty line resides in rural regions, indicating potential challenges in terms of limited resources and economic opportunities. Similarly, the majority of households with BPL ration cards are also concentrated in rural areas (35.8%), indicating that a significant number of households below the poverty line are situated in rural regions, potentially facing greater socio-economic hardships. These patterns suggest the presence of regional disparities in living standards, with rural areas potentially experiencing lower overall standards compared to semi-urban and urban areas. While the chi-square test indicates a weak association between ration card type and place of residence.

Table 4.35

Place of Residence and Occupation

Occupation		Place of residence			Total
		Rural	Semi urban	Urban	
Casual labour	N	30	1	8	39
	%	9.5	25.0	12.1	10.1
Domestic servant	N	3	0	0	3
	%	0.9	0.0	0.0	0.8
Government	N	19	0	6	25
	%	6.0	0.0	9.1	6.5
No job	N	107	0	12	119
	%	33.9	0.0	18.2	30.8
Private	N	45	2	13	60
	%	14.2	50.0	19.7	15.5
Professional	N	7	0	5	12
	%	2.2	0.0	7.6	3.1
Self employed	N	47	1	19	67
	%	14.9	25.0	28.8	17.4
Student	N	58	0	3	61
	%	18.4	0.0	4.5	15.8
Total	N	316	4	66	386
	%	100.0	100.0	100.0	100.0
Chi-Square (df)		Value=31.343 (14), p=0.005			

Source: Primary Survey, 2023

Table 4.35 connecting occupation and place of residence provides valuable insights into potential regional disparities in employment opportunities and economic conditions. The table categorizes occupations into various types and classifies the place of residence into rural, semi-urban, and urban areas. The frequency and percentage distribution reveal distinct patterns across different regions. For example, casual labourers are predominantly found in rural areas, indicating a higher reliance on labour-intensive industries in those regions. In contrast, individuals in government jobs are relatively evenly distributed across rural, semi-urban, and urban areas. Private job holders are more prevalent in semi-urban areas, suggesting greater access to formal employment opportunities in those regions. Professionals, on the other hand, are found in both rural and urban areas. The significant chi-square test

result indicates a statistically significant association between occupation and place of residence, supporting the presence of regional disparities in employment opportunities and economic activities.

Table 4.36

Place of Residence and Ownership of Land

Ownership		**Place of residence**			**Total**
		Rural	**Semi urban**	**Urban**	
Not Owned	N	14	0	3	17
	%	4.4	0.0	4.5	4.4
Owned	N	302	4	63	369
	%	95.6	100.0	95.5	95.6
Total	N	316	4	66	386
	%	100.0	100.0	100.0	100.0
Chi-Square (df)		Value=0.188 (2), p=0.910			

Source: Primary Survey, 2023

Table 4.36 illustrates the connection between place of residence and ownership of land provides insights into the distribution of land ownership across different regions. The table classifies individuals into two categories: "Not owned" and "Owned" based on land ownership, and further categorizes the place of residence into rural, semi-urban, and urban areas. The frequencies and percentages highlight the distribution patterns within each category. The findings indicate that most individuals surveyed across all three categories of place of residence are landowners. In rural areas, 95.6% of individuals own land, while in semi-urban and urban areas, 100% and 95.5% of individuals, respectively, have land ownership. The percentage of individuals who do not own land is relatively low across all regions. These results suggest that there are no significant disparities in land ownership among rural, semi-urban, and urban areas. The high rates of land ownership across all regions indicate a relatively equitable distribution of land ownership. The chi-square test result supports these observations, revealing no statistically significant association between place of residence and ownership of land. This further strengthens the notion that land ownership is consistent across different regions.

Table 4.37

Place of Residence and Possession of House

Possession		Place of Residence			Total
		Rural	Semi urban	Urban	
Owned	N	291	4	63	358
	%	92.1	100.0	95.5	92.7
Relatives	N	2	0	0	2
	%	0.6	0.0	0.0	0.5
Rent	N	23	0	3	26
	%	7.3	0.0	4.5	6.7
Total	N	316	4	66	386
	%	100.0	100.0	100.0	100.0
Chi-Square (df)		Value=1.410 (4), p=0.842			

Source: Primary Survey, 2023

Table 4.37 explores the connection between place of residence and possession of a house, provides insights into the distribution of housing arrangements among different regions. The table categorizes individuals based on their possession of a house, distinguishing between those who own their houses, those who live in houses owned by relatives and those who reside in rented accommodations. The findings reveal that a significant majority of individuals across all three categories of place of residence own their houses. In rural areas, 92.1% of individuals possess their houses, while in semi-urban and urban areas, 100% and 95.5% of individuals, respectively, have ownership of their houses. The percentages of individuals living in houses owned by relatives or residing in rented accommodations are relatively low across all regions. These results suggest that there are minimal regional disparities in terms of house possession. The high rates of house ownership across all regions indicate a relatively equitable distribution of housing arrangements. The chi-square test conducted on the data supports this observation, revealing no statistically significant association between place of residence and possession of a house. This further strengthens the notion that the distribution of housing arrangements is consistent across different regions.

Table 4.38

Regional Disparity in Income (in Rs.)

Place	N	Average Income	Std. Deviation	Std. Error
Rural	316	28864.241	23494.2010	1321.6521
Semi urban	4	13500.000	4434.7116	2217.3558
Urban	66	36021.212	21962.5732	2703.4059
Total	386	29928.756	23308.9053	1186.3920
ANOVA	F (2,383) =3.626, p= 0.028			

Source: Primary Survey, 2023

Table 4.38 explores regional disparities in income by providing information on average income, standard deviation and standard error across different regions. The data is categorized into rural, semi-urban, and urban areas. Looking at the average income figures, it is evident that the urban region has the highest average income at Rs. 36,021.212, followed by the rural region at Rs. 28,864.241, and the semi-urban region at Rs. 13,500. These figures give an overview of the income levels in each region and indicate that urban areas generally have higher income levels compared to rural and semi-urban areas. The standard deviation column provides insight into the variability of individual incomes within each region. The rural region displays the highest standard deviation at Rs. 23,494.2010, suggesting a wide range of income levels within the rural population. The urban region also shows significant income variability with a standard deviation of Rs. 21,962.5732. On the other hand, the semi-urban region exhibits the lowest standard deviation at Rs. 4,434.7116, indicating a relatively narrower range of incomes in this region. Additionally, the standard error values reflect the precision of the average income estimates. The standard error values for each region are Rs. 1,321.6521 for rural, Rs. 2,217.3558 for semi-urban, and Rs. 2,703.4059 for urban areas. These values provide an understanding of the accuracy of the sample mean as an approximation of the population mean in each region. To further analyse the significance of the regional disparities in income, an analysis of variance (ANOVA) test was conducted. The F-statistic is reported as 3.626, and the associated p-value is 0.028. This suggests that there is a statistically significant difference in income among the three regions. In

other words, the income variations observed are unlikely to have occurred by chance. So, the table presents an overview of income disparities across different regions. It indicates that urban areas generally have higher average incomes compared to rural and semi-urban areas. However, the variability of income is greater in rural and urban regions compared to the semi-urban region. The ANOVA test confirms that these income differences among the regions are statistically significant.

Table 4.39

Income, Expenditure and Net Income

		N	Mean	Std. Deviation	Std. Error	ANOVA
Total income	Rural	316	28864.24	23494.20	1321.65	F (2,383) = 3.626, p= 0.028
	Semi urban	4	13500.00	4434.71	2217.36	
	Urban	66	36021.21	21962.57	2703.41	
	Total	386	29928.76	23308.91	1186.39	
Total expenditure	Rural	316	20927.50	13169.12	740.82	F (2,383) = 6.992, p= 0.001
	Semi urban	4	14250.00	9878.43	4939.21	
	Urban	66	14696.97	10488.78	1291.08	
	Total	386	19792.98	12925.00	657.87	
Net Income	Rural	316	7936.74	20275.23	1140.57	F (2,383) = 12.701, p= 0.000
	Semi urban	4	-750.00	6800.74	3400.37	
	Urban	66	21324.24	19660.87	2420.09	
	Total	386	10135.78	20703.24	1053.77	

Source: Primary Survey, 2023, Net Income= Total Income –Total Expenditure

Table 5.39 provides information on income, expenditure, and net income, along with relevant statistical measures such as mean, standard deviation, and standard error. The data is segmented into rural, semi-urban, and urban areas. The table reveals the mean values for total income, total expenditure, and net income in each region. In terms of total income, the urban region has the highest mean at Rs. 36,021.21, followed by the rural region at Rs. 28,864.24 and the semi-urban region at Rs. 13,500. These figures depict the average income levels in each region. Similarly, the mean values for total expenditure show that the urban region has the highest average expenditure at Rs. 14,696.97, followed by the rural region at Rs. 20,927.50 and the

semi-urban region at Rs. 14,250. This information provides an overview of the spending patterns in each region. To assess the financial situation more comprehensively, the table includes net income, which is calculated as the difference between total income and total expenditure. The mean net income for the rural region is Rs. 7,936.74, indicating a positive net income on average. In contrast, the semi-urban region has a negative net income of Rs. -750.00, suggesting that, on average, expenses exceed income in this region. The urban region displays the highest mean net income at Rs. 21,324.24, implying a relatively better financial position. The standard deviation values provide insights into the dispersion of income, expenditure, and net income within each region. For example, the standard deviation of total income in the rural region is Rs. 23,494.20, indicating a wide variation in income levels among individuals. Similarly, the standard deviation of total expenditure in the urban region is Rs. 10,488.78, indicating variability in spending patterns. The standard error values reflect the precision of the mean estimates. These values are used to determine the accuracy of the sample mean as an approximation of the population mean. For instance, the standard error of net income in the semi-urban region is Rs. 3,400.37, indicating a relatively higher level of uncertainty in estimating the mean net income for this region. Additionally, ANOVA tests are conducted to examine the statistical significance of the differences in income, expenditure, and net income among the regions. The F-statistic and associated p-values are provided for each analysis. The results show that there are significant differences in income, expenditure, and net income among the regions, as indicated by the p-values below the conventional significance level of 0.05. Overall, the Table 5.39 offers insights into the income, expenditure, and net income patterns across different regions. It highlights variations in financial well-being, with urban areas generally having higher incomes and net incomes compared to rural and semi-urban areas.

In conclusion, the section's findings provide valuable insights into various aspects of the standard of living across different regions. The analysis of multiple tables has shed light on regional disparities in income, occupation, housing, amenities, and ownership of land. Regarding income, the data indicates that urban areas tend to

have higher average incomes compared to rural and semi-urban areas. However, it is important to note that there is considerable variation within each region, as indicated by the standard deviations. These findings suggest that urban residents generally have greater economic opportunities and potentially better financial well-being. The analysis of occupation reveals that the majority of respondents in the study were engaged in self-employment or private sector jobs. Casual labour and no job were also prevalent in the sample. This suggests a diverse employment landscape with a mix of formal and informal sectors, which can impact income levels and stability. Housing and facilities inventory show that a significant proportion of respondents have access to basic amenities such as attached bathrooms and inside kitchens. The possession and ownership of houses are also relatively high, indicating a certain level of stability in terms of housing. However, there are disparities in the quality of drinking water and waste disposal methods, which might have implications for health and living conditions. Examining ownership of land and possession of houses, the data indicates that the majority of respondents own both land and houses, regardless of the place of residence. This suggests a relatively high level of property ownership, which can contribute to overall economic stability and wealth accumulation.

Furthermore, the tables also highlight the significance of regional disparities in the standard of living. The data reveals variations in income, occupation, housing conditions, and amenities across rural, semi-urban, and urban areas. These disparities suggest that individuals living in different regions face distinct socio-economic realities and access to resources. In terms of income, urban areas consistently demonstrate higher average incomes compared to rural and semi-urban areas. This suggests that urban residents have greater earning potential and possibly better economic opportunities. However, it is important to address the considerable variations within each region, as indicated by the standard deviations. This implies that not all individuals within a specific region experience the same level of economic well-being. Occupation patterns also vary across regions, with self-employment and private sector jobs being predominant. Casual labour and unemployment appear more prevalent in the sample, indicating potential challenges

in securing stable employment. These findings highlight the need to address employment opportunities and support mechanisms for individuals in rural and semi-urban areas, where these issues may be more prominent. Housing conditions and amenities play a crucial role in determining the standard of living. The data indicates that a significant portion of respondents have access to basic amenities such as attached bathrooms and inside kitchens. However, discrepancies exist in access to clean drinking water and waste disposal methods. This suggests that certain regions may face challenges in terms of sanitation infrastructure and environmental sustainability, which can impact the overall quality of life. Ownership of land and houses is relatively high across all regions, indicating a level of stability and asset accumulation. However, the data does not provide insights into the distribution of land ownership or the quality of housing structures. It is essential to consider equity and the overall condition of housing stock when evaluating the standard of living. Lastly, the chapter examines the relationship between income, expenditure, and net income. The analysis highlights significant differences among the regions, with urban areas generally exhibiting higher incomes and net incomes compared to rural and semi-urban areas. This indicates varying levels of financial well-being and underscores the importance of considering both income and expenditure patterns when assessing the standard of living. In summary, the interpretation of the tables reveals regional disparities in income, occupation, housing, and financial well-being. These findings emphasize the importance of addressing these disparities to ensure a more equitable and improved standard of living for all individuals, regardless of their place of residence. Policy interventions aimed at enhancing employment opportunities, promoting access to basic amenities, and addressing income inequalities can contribute to narrowing the regional gaps and fostering overall socio-economic development.

Testing of Hypothesis

I. General hypothesis: socio-economic factors are affecting the quality of life.

Specific Hypothesis:

H_o: There is no significant difference in the HDI with respect to education qualification

H_1: There is a significant difference in the HDI with respect to education qualification

To analyze this hypothesis, an analysis of variance (ANOVA) has been performed on the parameter "HDI." The ANOVA method assesses whether the variations observed in the data are statistically significant and attributable to the different education qualification levels.

Table 4.40

Analysis of Variance (ANOVA) for HDI and Educational Qualification

ANOVA					
HDI and Education Qualification					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	12.093	5	3.023	5.553	.000
Within Groups	207.410	381	.544		
Total	219.503	386			

Source: Primary Survey, 2023

The ANOVA results provide insights into the variability of the "HDI" with respect to different education qualification levels. The F-statistic of 5.553 is accompanied by an extremely low p-value of 0.000. This p-value indicates that the observed differences in HDI across education qualification groups are statistically significant. As a result, we reject the null hypothesis (Ho) that there is no significant difference in the quality of life based on education qualification. The significant F-statistic, coupled with the low p-value, supports the alternative hypothesis (H1) that there is indeed a significant difference in the HDI among individuals with different levels of education qualification. In other words, education qualification appears to play a notable role in influencing the HDI. Overall, these findings underscore the importance of education qualification as a contributing factor to differences in the HDI. This information can be of substantial value for policymakers, researchers, and

organizations seeking to develop strategies to enhance the well-being of individuals with diverse education backgrounds.

Ho: There is no significant difference in the HDI with respect to occupation and income

H1: There is a significant difference in the HDI with respect to occupation and income

Table 4.41
Analysis of Variance (ANOVA) for HDI, Occupation and Income Category

ANOVA					
HDI and Occupation					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	7.776	7	1.111	4.765	.043
Within Groups	211.727	378	.560		
Total	219.503	385			
ANOVA					
HDI and income Category					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	6.212	5	1.242	4.831	.031
Within Groups	213.291	380	.561		
Total	219.503	385			

Source: Primary Survey, 2023

Two separate analyses of variance (ANOVA) have been performed, one for "Standard of Living and Occupation" and another for "HDI and Income Category." The ANOVA methodology is used to examine whether the variations in quality of life are statistically significant across different occupation and income groups. For both "HDI and Occupation" and "HDI and Income Category" analyses, the F-statistics are accompanied by p-values below the conventional threshold of significance (0.05). Specifically, the p-values are 0.043 and 0.031, respectively. These p-values suggest that the observed differences in the HDI among occupation and income categories are statistically significant.

Ho: There is no significant difference in the HDI with respect to community

H1: There is a significant difference in HDI life with respect to community

Table 4.42

Analysis of Variance (ANOVA) for HDI and Religion

ANOVA					
HDI and Religion					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	.224	2	.112	4.541	.045
Within Groups	219.279	383	.573		
Total	219.503	385			

Source: Primary Survey, 2023

The ANOVA results reveal an F-statistic of 4.541, along with p-value of .045. The p-value signifies the level of statistical significance and informs whether the observed differences in quality of life across religious communities are substantial enough to reject the null hypothesis (Ho). In this instance, p-value indicates that the observed differences in quality of life based on religious communities are statistically significant. Therefore, the data does provide sufficient evidence to support the rejection of the null hypothesis (Ho). This suggests that there is substantial variation in the HDI among different religious communities in the context of the studied parameters. The results of this analysis underscore that, according to the available data, religion does seem to be a significant determinant of differences in quality of life.

4.3 Happiness Status

The pursuit of happiness and well-being is a fundamental goal for individuals and societies alike. As societies strive to enhance the quality of life and improve overall well-being, measuring and understanding happiness becomes essential. One approach to capturing this elusive concept is through the use of a happiness index. In this chapter, we delve into the happiness index of Malappuram district, exploring the factors that contribute to the well-being and happiness of its residents. The concept of a happiness index, also known as a well-being index or subjective well-being

index, aims to measure and quantify people's overall happiness and satisfaction with their lives. While the previous tables provided insights into various socio-economic factors, they did not directly measure subjective happiness or well-being. A happiness index typically takes into account a range of factors, including individuals' subjective assessments of their own happiness, life satisfaction, and overall well-being. The happiness index offers a more comprehensive perspective, taking into account subjective assessments of happiness and life satisfaction, along with objective indicators of well-being. By examining factors such as income, education, health, social support, and environmental quality, we can gain a deeper understanding of the happiness levels and overall well-being of residents of Malappuram. In the following chapters, we will delve into the data and explore the relationships between various socio-economic factors, quality of life indicators, and the happiness index of Malappuram district. By shedding light on the happiness levels of the residents and the factors that contribute to their well-being, we aim to contribute to the ongoing efforts to create happier, more fulfilling lives for the people of Malappuram.

Table 4.43

Psychological Well-Being

Statements	N	Mean	Std. Deviation
I lead a purposeful and meaningful life.	386	4.0699	.95498
My social relationships are supportive and rewarding.	386	4.1710	.90699
I am engaged and interested in my daily activities.	386	4.2176	.89402
I actively contribute to the happiness and well-being of others.	386	4.2668	.83357
I am competent and capable in the activities that are important to me.	386	4.1995	.84614
I am a good person and live a good life.	386	4.2306	.90379
I am optimistic about my future.	386	4.0959	.96894
People respect me.	386	4.1736	.98478
Overall Psychological Wellbeing	386	4.1781	.74594

Source: Primary Survey, 2023, label: 1 SDA, 5 SA

Table4.43 provides an overview of the psychological well-being of respondents in terms of various statements in Malappuram district. The table includes the number of participants (N), the mean scores, and the standard deviation for each statement. The findings indicate that, on average, respondents in Malappuram district reported relatively high levels of psychological well-being. Across all statements, the mean scores ranged from 4.0699 to 4.2668 on a scale of 1 to 5, suggesting positive perceptions of well-being. Participants reported leading a purposeful and meaningful life with a mean score of 4.0699. They also indicated that their social relationships were supportive and rewarding, as evidenced by a mean score of 4.1710. Respondents expressed engagement and interest in their daily activities, with a mean score of 4.2176. Furthermore, participants reported actively contributing to the happiness and well-being of others, as reflected in a mean score of 4.2668. In terms of self-perception, respondents believed they were competent and capable in activities that were important to them, with a mean score of 4.1995. They also felt they were good people living good lives, as indicated by a mean score of 4.2306. Respondents showed optimism about their future with a mean score of 4.0959. Additionally, participants felt respected by others, with a mean score of 4.1736. Overall, the participants' psychological well-being, as measured by the overall well-being score, was relatively high, with a mean score of 4.1781. This suggests that respondents in Malappuram district have positive perceptions of their psychological well-being across various dimensions.

Table 4.44

Gender wise Psychological Well-Being

Statements	Gender	N	Mean	Std. Dev.	Std. Error Mean	t-test (df: 384)
I lead a purposeful and meaningful life.	Female	43	4.53	0.77	0.12	3.434* 0.001
	Male	343	4.01	0.96	0.05	
My social relationships are supportive and rewarding.	Female	43	4.60	0.62	0.09	3.371* 0.001
	Male	343	4.12	0.92	0.05	
I am engaged and interested in my daily activities.	Female	43	4.67	0.68	0.10	3.609* 0.000
	Male	343	4.16	0.90	0.05	
I actively contribute to the happiness and well-being of others.	Female	43	4.63	0.69	0.11	3.045* 0.002
	Male	343	4.22	0.84	0.05	
I am competent and capable in the activities that are important to me.	Female	43	4.70	0.67	0.10	4.183* 0.000
	Male	343	4.14	0.85	0.05	
I am a good person and live a good life.	Female	43	4.60	0.76	0.12	2.907* 0.004
	Male	343	4.18	0.91	0.05	
I am optimistic about my future.	Female	43	4.58	0.79	0.12	3.538* 0.000
	Male	343	4.03	0.97	0.05	
People respect me.	Female	43	4.65	0.78	0.12	3.420* 0.001
	Male	343	4.11	0.99	0.05	
Overall Psychological Wellbeing	Female	43	4.62	0.64	0.10	4.230* 0.000
	Male	343	4.12	0.74	0.04	

*Source: Primary Survey, 2023, *- Equal variances assumed, label: 1 SDA, 5 SA*

Table 4.44 presents the results of the assessment of psychological well-being based on gender in Malappuram district. The table includes various statements related to different aspects of psychological well-being, along with the number of respondents (N), the mean scores, standard deviation, standard error mean, t-test values, and p-values. The findings indicate significant differences in psychological well-being between females and males in several dimensions. Females reported higher mean scores across multiple statements compared to males, suggesting a relatively higher level of psychological well-being. In terms of leading a purposeful and meaningful

life, females scored significantly higher (mean = 4.53) compared to males (mean = 4.01). Similarly, females reported more supportive and rewarding social relationships (mean = 4.60) compared to males (mean = 4.12). The gender disparity in engagement and interest in daily activities was also observed, with females (mean = 4.67) scoring higher than males (mean = 4.16). Furthermore, females exhibited a higher sense of actively contributing to the happiness and well-being of others (mean = 4.63) compared to males (mean = 4.22). Females also displayed a greater sense of competence and capability in important activities (mean = 4.70) compared to males (mean = 4.14). Regarding optimism about the future, females (mean = 4.58) demonstrated a more positive outlook than males (mean = 4.03). Females also perceived higher levels of respect from others (mean = 4.65) compared to males (mean = 4.11). Overall, when considering the overall psychological well-being score, females (mean = 4.62) had a significantly higher level of psychological well-being than males (mean = 4.12). These findings suggest that females in Malappuram district experience a relatively higher level of psychological well-being compared to males. The results indicate that females tend to have a greater sense of purpose, engagement, social support, competence, optimism, and perceived respect. It is important to note that the data is based on self-report measures and individual perceptions of psychological well-being. The findings provide valuable insights into the gender disparities in psychological well-being in Malappuram district and highlight the need for targeted interventions and support systems to enhance the well-being of both females and males, with particular attention to the areas where gender differences are evident.

Table 4.45

Institutional Trust

	No		Yes	
	N	**%**	**N**	**%**
Confidence in the government	83	23.5	303	78.5
Confidence in the judicial system and courts	74	19.2	312	80.8
Confidence in the honesty of the election	90	23.3	296	76.7
Confidence in the local police force	75	19.4	311	80.6

Source: Primary Survey, 2023

Table 4.45 presents the results of the Institutional Trust survey, specifically focusing on respondents' confidence in various institutions in Malappuram district. The table displays the number (N) and percentage (%) of respondents who answered "No" or "Yes" to each statement. Regarding confidence in the government, 23.5% of respondents expressed no confidence, while the majority, 78.5%, indicated trust in the government. Similarly, when it comes to the judicial system and courts, 19.2% of respondents lacked confidence, while 80.8% expressed trust. In terms of the honesty of elections, 23.3% of respondents reported no confidence, whereas 76.7% stated their confidence in the integrity of the electoral process. Lastly, concerning the local police force, 19.4% of respondents lacked confidence, while 80.6% had trust in the police. The data from this table provide insights into the levels of institutional trust within Malappuram district. It suggests that a significant proportion of respondents expressed confidence in the government, judicial system, honesty of elections, and local police force. However, there is also a notable portion that lacks trust in these institutions.

Table 4.46

Gender Wise Institution Trust

			Gender		Total	Chi-Square (df)
			Female	Male		
Confidence in the government	No	N	4	79	83	Value =4.267 (1) p=0.039
		%	9.3	23.0	21.5	
	Yes	N	39	264	303	
		%	90.7	77.0	78.5	
Confidence in the judicial system and courts	No	N	3	71	74	Value =4.644 (1) p=0.031
		%	7.0	20.7	19.2	
	Yes	N	40	272	312	
		%	93.0	79.3	80.8	
Confidence in the honesty of the election	No	N	10	80	90	Value =0.000 (1) p=0.992
		%	23.3	23.3	23.3	
	Yes	N	33	263	296	
		%	76.7	76.7	76.7	
Confidence in the local police force	No	N	1	74	75	Value =9.043 (1) p=0.003
		%	2.3	21.6	19.4	
	Yes	N	42	269	311	
		%	97.7	78.4	80.6	
Total		N	43	343	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.46 presents the gender-wise analysis of institutional trust in Malappuram district. Regarding confidence in the government, 9.3% of females expressed no confidence, whereas 23.0% of males shared the same sentiment. Conversely, 90.7% of females and 77.0% of males indicated trust in the government. The chi-square test reveals a significant difference between genders in terms of confidence in the government (chi-square value = 4.267, p = 0.039).In relation to confidence in the judicial system and courts, 7.0% of females lacked trust, while 20.7% of males expressed the same. Conversely, 93.0% of females and 79.3% of males had confidence in the judicial system and courts. The chi-square test indicates a significant gender difference in this aspect of institutional trust (chi-square value = 4.644, p = 0.031).Regarding confidence in the honesty of elections, both females and males had similar levels of trust, with 23.3% expressing no confidence and 76.7% indicating trust. The chi-square test results indicate no significant gender difference in this aspect of institutional trust (chi-square value = 0.000, p = 0.992).When it comes to confidence in the local police force, 2.3% of females lacked trust, whereas 21.6% of males shared the same sentiment. Conversely, 97.7% of females and 78.4% of males expressed confidence in the local police force. The chi-square test reveals a significant gender difference in this aspect of institutional trust (chi-square value = 9.043, p = 0.003).Overall, the table highlights gender differences in institutional trust within Malappuram district. It shows variations in confidence levels between females and males concerning the government, judicial system and courts, and the local police force. These findings suggest the importance of considering gender perspectives when addressing and improving institutional trust.

Table 4.47

Social Support

	No		Yes	
	N	**%**	**N**	**%**
Relatives or friends you can count on to help You when you need them	78	20.2	308	79.8
Support from public regarding social and economic problems	98	25.4	288	74.6
Support from the government	118	30.6	268	69.4

Source: Primary Survey, 2023

Table 4.47 presents the analysis of social support in Malappuram district. In terms of having relatives or friends to count on when needed, 79.8% of respondents indicated having such support, while 20.2% reported a lack of support in this area. Regarding support from the public regarding social and economic problems, 74.6% of respondents reported receiving support, while 25.4% expressed a lack of support in this domain. In relation to support from the government, 69.4% of respondents indicated receiving support, while 30.6% reported a lack of support in this aspect. The table provides a snapshot of the social support landscape in Malappuram district. It suggests that a significant majority of respondents have relatives or friends they can count on for help when needed. Additionally, a majority of respondents reported receiving support from the public and the government in addressing social and economic issues. However, it is worth noting that a considerable proportion of respondents expressed a lack of support in these areas. It highlights the importance of fostering strong social networks, enhancing public support mechanisms, and improving government initiatives to address the social and economic concerns of the residents in Malappuram district. By addressing the gaps in social support, it is possible to enhance the overall well-being and happiness of the community.

Table 4.48

Gender Wise Social Support

			Gender		Total	Chi-Square (df)
			Female	Male		
Relatives or friends you can count on to help You when you need them	No	N	2	76	78	Value =7.263 (1) p=0.007
		%	4.7	22.2	20.2	
	Yes	N	41	267	308	
		%	95.3	77.8	79.8	
Support from public regarding social and economic problems	No	N	11	87	98	Value =0.001 (1) p=0.975
		%	25.6	25.4	25.4	
	Yes	N	32	256	288	
		%	74.4	74.6	74.6	
Support from the government	No	N	6	112	118	Value =6.295 (1) p=0.012
		%	14.0	32.7	30.6	
	Yes	N	37	231	268	
		%	86.0	67.3	69.4	
Total		N	43	343	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.48 provides an analysis of gender-wise social support in Malappuram district. In terms of having relatives or friends to count on when needed, 79.8% of all respondents reported having this support. When examining the data by gender, 95.3% of females and 77.8% of males reported having support from relatives or friends. This difference in social support between genders was found to be statistically significant (Chi-Square = 7.263, p = 0.007), indicating that females tend to have a higher level of social support in this aspect compared to males. Regarding support from the public regarding social and economic problems, 74.6% of all respondents reported receiving this support. The gender-wise analysis revealed that 74.4% of females and 74.6% of males reported receiving support from the public. The difference in support between genders in this area was not found to be statistically significant (Chi-Square = 0.001, p = 0.975), suggesting that both genders have similar levels of support from the public in addressing social and economic issues. When examining support from the government, 69.4% of all respondents reported receiving this support. Among females, 86.0% reported receiving support from the government, while among males, 67.3% reported the same. The gender-wise analysis revealed a statistically significant difference in support from the government between females and males (Chi-Square = 6.295, p = 0.012), indicating that females tend to have higher levels of support from the government compared to males. These findings shed light on the gender disparities in social support within Malappuram district. While both genders generally report having support from relatives or friends and the public, females tend to receive higher levels of support in these areas. Additionally, females also report higher levels of support from the government compared to males.

Table 4.49

Freedom

	No		Yes	
	N	**%**	**N**	**%**
Freedom to wear cloth you like	47	12.2	339	87.8
Freedom to spend money as you like	75	19.4	311	80.6
Freedom to study the courses as you like	59	15.3	327	84.7
Freedom to eat food as you like	41	10.6	345	89.4
Freedom to travel	74	19.2	312	80.8
Freedom to invest	64	16.6	322	83.4
Freedom to choose occupation as you like	64	16.6	322	83.4

Source: Primary Survey, 2023

Table 4.49 presents the responses regarding freedom in various aspects among the respondents in Malappuram district. In terms of the freedom to wear the clothes they like, the majority of respondents (87.8%) reported having this freedom, while 12.2% indicated a lack of this freedom. Regarding the freedom to spend money as desired, 80.6% of respondents reported having this freedom, with 19.4% reporting a lack of it. Similarly, a significant majority of respondents (84.7%) reported having the freedom to study the courses they like, while 15.3% indicated a lack of this freedom. Regarding the freedom to eat food as desired, the majority of respondents (89.4%) reported having this freedom, while 10.6% reported a lack of it. In terms of the freedom to travel, 80.8% of respondents reported having this freedom, with 19.2% indicating a lack of it. The majority of respondents (83.4%) also reported having the freedom to invest and choose their occupation as desired, with 16.6% indicating a lack of these freedoms. Overall, the data suggests that a significant proportion of respondents in Malappuram district reported having various freedoms in their lives. However, it is important to note that a notable percentage of respondents indicated a lack of freedom in certain areas. It is crucial to uphold and promote individual freedoms as they are fundamental to personal well-being and the overall development of a society. By addressing any gaps in the provision of freedoms identified in this survey, steps can be taken to foster a more inclusive and empowering environment for the residents of Malappuram district.

Table 4.50

Gender Wise Freedom

			Gender		Total	Chi-Square (df)
			Female	Male		
Freedom to wear cloth you like	No	N	4	43	47	Value =0.374 (1) p=0.541
		%	9.3	12.5	12.2	
	Yes	N	39	300	339	
		%	90.7	87.5	87.8	
Freedom to spend money as you like	No	N	12	63	75	Value =2.221 (1) p=0.136
		%	27.9	18.4	19.4	
	Yes	N	31	280	311	
		%	72.1	81.6	80.6	
Freedom to study the courses as you like	No	N	8	51	59	Value =0.412 (1) p=0.521
		%	18.6	14.9	15.3	
	Yes	N	35	292	327	
		%	81.4	85.1	84.7	
Freedom to eat food as you like	No	N	3	38	41	Value =0.677 (1) p=0.411
		%	7.0	11.1	10.6	
	Yes	N	40	305	345	
		%	93.0	88.9	89.4	
Freedom to travel	No	N	10	64	74	Value =0.521 (1) p=0.740
		%	23.3	18.7	19.2	
	Yes	N	33	279	312	
		%	76.7	81.3	80.8	
Freedom to invest	No	N	3	61	64	Value =3.227 (1) p=0.072
		%	7.0	17.8	16.6	
	Yes	N	40	282	322	
		%	93.0	82.2	83.4	
Freedom to choose occupation as you like	No	N	5	59	64	Value =0.858 (1) p=0.354
		%	11.6	17.2	16.6	
	Yes	N	38	284	322	
		%	88.4	82.8	83.4	
Total		N	43	343	386	
		%	100.0	100.0	100.0	

Source: Primary Survey, 2023

Table 4.50 provides a gender-wise analysis of the freedom experienced by respondents in different aspects in Malappuram district. For the freedom to wear clothes they like, the data shows that there is no significant difference between females and males. Both genders reported a similar percentage of having this freedom (87.8% for females and 87.5% for males).Similarly, there is no significant gender difference in the freedom to spend money as desired. The majority of both females (81.6%) and males (80.6%) reported having this freedom. Regarding the

freedom to study the courses they like, both females (85.1%) and males (84.7%) reported a similar percentage of having this freedom, indicating no significant gender difference. In terms of the freedom to eat food as desired, there is no significant gender difference. The majority of both females (88.9%) and males (89.4%) reported having this freedom. For the freedom to travel, there is no significant difference between females (81.3%) and males (80.8%). Both genders reported a similar percentage of having this freedom. Regarding the freedom to invest, although females (82.2%) reported a slightly lower percentage of having this freedom compared to males (83.4%), the difference is not statistically significant. Similarly, there is no significant gender difference in the freedom to choose occupation as desired. Both females (82.8%) and males (83.4%) reported a similar percentage of having this freedom. Overall, the data suggests that there are no significant gender differences in the freedom experienced by respondents in various aspects in Malappuram district. Both females and males reported similar levels of freedom in terms of clothing, spending money, education, food choices, travel, investment, and occupation selection. These findings highlight the overall equitable distribution of freedom among the genders in the district. It signifies a positive aspect of societal equality and indicates that both genders have relatively similar opportunities to exercise their freedom in these areas.

Table 4.51

Regressions to Explain Average Happiness: Explanation of Variables

Independent Variables	Variable Category	Type of Variable
Psychological wellbeing (5 scale)	Dependent Variable	Scale/Ratio
Monthly family income (in Rs.)	Independent Variable	Scale/Ratio
Overall health (5 scale)	Independent Variable	Scale/Ratio
Institutional trust (2 scale)	Independent Variable	Scale/Ratio
Social support (2 scale)	Independent Variable	Scale/Ratio
Freedom (2 scale)	Independent Variable	Scale/Ratio
Age	Independent Variable	Scale/Ratio
Gender	Independent Variable	Dummy

Source: Primary Survey, 2023

Table 4.51 provides an overview of the variables used in regression analysis to explain the average happiness of respondents in Malappuram district. The table includes the independent variables, their variable category, type of variable, and the coding or sub-variables included within each variable. The dependent variable in the regression analysis is "Psychological Wellbeing," which is measured on a scale/ratio. It is calculated as the average of eight variables related to psychological well-being. The independent variables consist of several factors that may influence average happiness. These variables include:

- Monthly family income (in Rs.): This is an independent variable measured on a scale/ratio. It represents the monthly income of the respondents' families.
- Overall health: This independent variable is measured on a scale/ratio and is calculated as the average of two variables related to the respondents' overall health.
- Institutional trust: This independent variable is measured on a scale/ratio and represents the average of four variables related to trust in institutions such as the government, judicial system, election process, and local police force.
- Social support: This independent variable is measured on a scale/ratio and is calculated as the average of three variables related to support from relatives or friends, support from the public regarding social and economic problems, and support from the government.
- Freedom: This independent variable is measured on a scale/ratio and represents the average of eight variables related to different aspects of freedom, including clothing choices, spending money, education, food choices, travel, investment, and occupation selection.
- Age: This independent variable is measured on a scale/ratio and represents the age of the respondents.
- Gender: This independent variable is a dummy variable coded as 0 for female and 1 for male.

By analysing the relationship between the dependent variable of psychological well-being and the independent variables, this regression analysis aims to understand the impact of factors such as income, health, institutional trust, social support, freedom, age, and gender on the average happiness of individuals in Malappuram district.

Psychological Wellbeing = F (Monthly family income, Overall health, Institutional trust, social support, Freedom, Age, Gender)

Table 4.52

Regressions to Explain Psychological Wellbeing

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	**.622**	**.387**	**.375**	**.58962**	**1.530**

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	82.811	7	11.830	34.029	.000
	Residual	131.413	378	.348		
	Total	214.224	385			

Coefficients							
	Unstandardized Coefficients		Standa-rdized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.884	.216		13.348	.000		
Total income	-0.000003	.000	-.105	-2.473	.014	.903	1.108
Overall health	.272	.035	.346	7.776	.000	.821	1.217
Institutional trust	.094	.097	.041	.965	.335	.916	1.091
Social support	.685	.110	.275	6.251	.000	.841	1.189
Freedom	.386	.145	.118	2.662	.008	.825	1.212
Age	-.006	.002	-.102	-2.418	.016	.910	1.099
Gender	-.348	.098	-.147	-3.555	.000	.947	1.056

Source: Primary Survey, 2023

Table 4.52 presents the regression analysis results to explain psychological well-being. The table includes information on the model summary, ANOVA, and coefficients of the independent variables.

Model Summary:

R: The correlation coefficient (multiple correlation) indicates a moderate positive relationship between the independent variables and psychological well-being, with a value of 0.622.

R Square: The coefficient of determination shows that 38.7% of the variance in psychological well-being can be explained by the independent variables.

Adjusted R Square: This value, adjusted for the number of predictors in the model, is 37.5%. It provides a more conservative estimate of the variance explained.

Std. Error of the Estimate: The standard error is 0.58962, representing the average difference between the observed and predicted values of psychological well-being.

Durbin-Watson: This statistic tests for the presence of autocorrelation in the residuals. The value of 1.530 suggests a positive autocorrelation.

ANOVA:

The ANOVA table displays the sum of squares, degrees of freedom (df), mean square, F-value and significance level. The regression model accounts for a significant amount of variance in psychological well-being, as indicated by the F-value of 34.029 and a p-value of 0.000.

Coefficients:

Based on the regression analysis results presented in Table 4.52, let's discuss the variables and their associations with psychological well-being:

- Total income: The coefficient is -0.000003, indicating a negative but weak association with psychological well-being. The significance level (p-value) is 0.014, suggesting a statistically significant relationship. A possible

explanation for this association could be that individuals with higher income may have better access to resources and opportunities that contribute to their well-being. Conversely, lower income levels may lead to financial stress and limited access to resources, potentially impacting psychological well-being.

- Overall health: This variable has a positive coefficient of 0.272, indicating a strong positive association with psychological well-being ($p < 0.001$). This finding is consistent with existing research showing that good physical health is linked to better mental well-being. When individuals are in good health, they may experience fewer physical limitations, higher energy levels, and overall better functioning, which can positively impact their psychological well-being.

- Institutional trust: The coefficient is 0.094, indicating a weak positive association with psychological well-being, but it is not statistically significant ($p = 0.335$). This suggests that the level of trust in institutions, such as the government or judiciary, does not have a significant direct impact on psychological well-being in this particular model. Other factors, such as personal relationships or individual characteristics, may play a more substantial role in influencing well-being.

- Social support: The coefficient is 0.685, indicating a strong positive association with psychological well-being ($p < 0.001$). This result aligns with the well-established understanding that having supportive relationships and social connections is crucial for psychological well-being. Social support can provide emotional, instrumental, and informational assistance, buffering individuals from stress and enhancing their overall well-being.

- Freedom: The coefficient is 0.386, suggesting a moderate positive association with psychological well-being ($p = 0.008$). This finding implies that having the freedom to make choices and engage in activities according to one's preferences and values is beneficial for psychological well-being.

Autonomy and self-determination contribute to a sense of control and fulfilment, promoting positive mental health outcomes.

- Age: The coefficient is -0.006, indicating a weak negative association with psychological well-being ($p = 0.016$). Although the effect size is small, it suggests that older individuals may have slightly lower levels of psychological well-being compared to younger individuals in this model. Various factors, such as physical health changes, life transitions, and societal attitudes, could contribute to this relationship, but further research is needed to better understand the underlying mechanisms.

- Gender: The coefficient is -0.348, indicating a negative association with psychological well-being for males compared to females ($p < 0.001$). This finding suggests that, in this model, males tend to have lower levels of psychological well-being compared to females.

In conclusion, the current section examined various factors associated with psychological well-being based on the data presented in the tables. The findings shed light on the relationships between different variables and their impact on individuals' psychological well-being. Table4. 43 highlighted the different aspects of psychological well-being, including leading a purposeful life, social relationships, engagement in daily activities, contribution to the well-being of others, competence, optimism about the future, and earning respect from others. The mean scores indicated that, overall, participants reported a moderate to high level of psychological well-being. Table 4.46 explored institutional trust, indicating the level of confidence individuals had in the government, judicial system, honesty of elections, and local police force. The results suggested that individuals generally exhibited higher levels of trust in the government and judicial system, while trust in the honesty of elections and local police force was relatively lower. Furthermore, Table 4.47 examined social support, revealing the presence of relatives or friends to count on, support from the public regarding social and economic problems, and support from the government. The findings indicated that individuals reported higher levels of social support from relatives or friends compared to support from the

public and the government. Table 4.49 delved into the concept of freedom, including the freedom to wear clothes, spend money, study courses, eat food, travel, invest, and choose an occupation. The results indicated that participants generally perceived themselves to have a high level of freedom in these areas. The subsequent analysis in Table 4.50 explored the gender differences in institutional trust, social support, and freedom. The findings highlighted some significant variations in trust, support, and freedom between females and males. These differences may reflect societal, cultural, and individual factors influencing the experiences and perceptions of individuals belonging to different genders. Finally, Table 4.52 presented a regression analysis to explain psychological well-being. The model incorporated variables such as total income, overall health, institutional trust, social support, freedom, age, and gender. The results demonstrated that overall health, social support, and freedom had significant positive associations with psychological well-being, suggesting their importance in fostering positive mental well-being. Total income, age, and gender also showed significant but weaker associations with psychological well-being. In summary, the chapter provided valuable insights into the factors influencing psychological wellbeing. The findings emphasized the significance of factors such as overall health, social support, and freedom in promoting positive mental well-being. The results also highlighted the importance of considering variables such as total income, age, and gender in understanding the complexities of psychological well-being.

The Human Development Index (HDI) is a widely recognized composite index that measures the overall development of countries based on three key dimensions:

- Life Expectancy: This dimension reflects the health and well-being of a nation's population. It is measured by the average number of years a person is expected to live from birth. Higher life expectancy indicates better access to healthcare, nutrition, and overall living conditions.

- Education: The education dimension captures both the quantity and quality of education within a country. It is assessed through indicators such as mean years of schooling, which measures the average number of years a person

aged 25 and older has spent in formal education, and expected years of schooling, which estimates the number of years a child of school-entry age is expected to receive education.

- Gross National Income (GNI) per capita: This dimension reflects the economic well-being of individuals within a country. GNI per capita measures the average income earned by residents, including income from both domestic and international sources. It provides an indication of the standard of living and economic opportunities available to citizens.

For the purpose of analysis, the current study used Education index, Health index and Income index to form human development index, the education index can provide some indication of educational attainment within a specific population. It can help gauge the level of formal education achieved by individuals and serve as a rough proxy for the Education Index. The health index can provide an approximation of the population's health and well-being, which is closely related to life expectancy. By assessing factors such as self-reported health conditions, disabilities, and lifestyle choices, it is possible to gain some insight into the population's health status. Income is used as a proxy for GNP, which represents the total economic output of a country. By assessing the income levels of respondents, it is possible to get an idea of the financial well-being of a population. the current study standardized each variable as they are measured in different units. The education qualification and other qualitative variables of respondents was standardized to create Education Index, the overall health status of respondents was standardized to create health Index as a proxy for the Life Expectancy Index, and income was standardized to represent Gross National Product (GNP). Standardization ensures that all variables are measured on a comparable scale, allowing for meaningful comparisons and analysis across the different proxies. Geometric mean (equally-weighted) of these variables is used to calculate HDI.

Interpret the HDI: The resulting value from the geometric mean calculation represents the Human Development Index (HDI). It provides a composite measure of the three variables, reflecting an overall assessment of education, health and

income. A higher HDI value generally indicates a higher level of human development.

It is important to note that this is a simplified approach and does not reflect the exact methodology used by official sources such as the United Nations Development Programme (UNDP). The UNDP uses specific weights, thresholds, and other factors in calculating the HDI.

HDI: Human Development index is the Geometric Mean of Health, Education, and Income Indices

$$HDI = 3\sqrt{HI\ X\ EI\ X\ YI)}$$

$$HDI = 3\sqrt{0.4468\ X\ 0.5947\ X\ 0.2367}$$

$$HDI = 3\sqrt{0.060078}$$

$$HDI = 0.4165$$

As per 2005 HDI report of UN, Malappuram district has the 14th rank among the districts of Kerala with HDI score 0.749. But as per the study, the HDI of Malappuram district is only 0.4165 which shows Malappuram district has a relatively low level of human development in the somewhat quality perspectives.

Table 4.53

Gender Wise HDI

Gender	Mean HDI	N	Std. Deviation
Female	.4181	72	.13055
Male	.4123	314	.12636
Independents Sample t-test	t (386) =-0.428, p=0.669		

Source: Primary Survey, 2023

The Gender Wise HDI data presented in table 4.53 provides insights into the mean HDI values for females, males, and the total population, as well as the associated standard deviations. According to the data, the mean HDI for females is 0.4181, whereas for males, it is 0.4123. To determine whether there is a significant

difference between the HDI values of females and males, an independent sample t-test was conducted. The t-value obtained from the test is -0.428, with 386 degrees of freedom. The corresponding p-value is 0.669. This suggests that there is no statistically significant difference between the HDI values of females and males at the given level of significance. The difference in mean HDI between females and males is relatively small, indicating a relatively small gender disparity in terms of human development.

Table 4.54

Place of Residence Wise HDI

Place	N	Mean HDI	Std. Deviation	Std. Error
Rural	316	.4081	.11992	.0401612
Semi urban	4	.3017	.15831	.4021604
Urban	66	.4802	.14108	.1145437
Total	386	.4081	.11992	.0384323
ANOVA		F (2,383)= 0.635, p= 0.530		

Source: Primary Survey, 2023

The Place of Residence Wise HDI data presented in table 4.54 provides insights into the mean HDI values with respect to place of residence. The mean HDI for rural areas is 0.4081, indicating a better human development compare to Semi-urban. In comparison, urban areas exhibit a higher mean HDI of 0.4802, suggesting a relatively better level of human development. Semi urban areas also have a mean HDI of 0.3017, indicating relatively a low level of human development to semi-urban regions. The overall mean HDI for the total population is 0.4081. The standard deviations provide information about the variability of HDI scores within each place of residence category. Rural areas show a standard deviation of 0.11992, indicating significant dispersion in HDI values. Semi-urban areas have a standard deviation of 0.15831, suggesting relatively higher variability. Urban areas exhibit the highest variability with a standard deviation of 0. 4802.The standard errors measure the precision of the estimated mean HDI values for each place of residence category. The ANOVA test conducted to examine the significance of differences in mean HDI values among the different places of residence yields an F-value of 0.635.

The associated p-value is 0.530, indicating that there is no statistically significant difference in mean HDI values among rural, semi-urban, and urban areas at the given level of significance.

In conclusion, the chapter examined various factors related to human development, including education, health, and income. Health index as a proxy for the Life Expectancy Index, income as a proxy for Gross National Product (GNP) and education index was used. These variables were standardized to ensure comparability across different units of measurement. The analysis of the Gender Wise HDI data revealed that there was no significant difference in the mean HDI values between females and males. This suggests a relatively equal level of human development between the genders. However, further investigation and consideration of the specific context are necessary to fully understand gender disparities in human development. Similarly, the Place of Residence Wise HDI data indicated variations in mean HDI values across different areas. While semi-urban areas exhibited lower levels of human development, rural and urban areas showed relatively higher mean HDI values. However, the ANOVA test did not find a significant difference in mean HDI values among the different places of residence. The results provide valuable insights into human development disparities and highlight the complexity of measuring and understanding human development. Future research should consider additional factors and take into account the limitations of the data to gain a more comprehensive understanding of human development patterns and potential policy implications.

CHAPTER V

HOUSEHOLD EXPENDITURE PATTERN IN MALAPPURAM DISTRICT: A COMPREHENSIVE ANALYSIS

CONTENTS

The patterns and trends of household expenditure play a crucial role in understanding the economic dynamics and consumer behaviour within a specific region. The expenditure patterns of households provide valuable insights into the allocation of resources, the standard of living, and the overall economic well-being of individuals and communities. In the context of Malappuram district, a region known for its diverse socio-economic landscape, it becomes essential to explore and analyse the expenditure patterns of households to gain a comprehensive understanding of the district's economic dynamics. The objective of this chapter is to identify and analyse the expenditure patterns of households in Malappuram district. By delving into the spending behaviours and consumption patterns of households, this study aims to shed light on the allocation of resources across different categories and assess the economic priorities of households within the district. Furthermore, understanding the expenditure patterns can provide insights into the overall economic well-being and living standards of the population, contributing to informed policy-making and targeted interventions. To achieve this objective, the study will utilize data collected through surveys and interviews conducted among a representative sample of households in Malappuram district. The data will capture information on various expenditure categories, such as food, housing, education, healthcare, transportation, and leisure activities. By analysing the expenditure patterns across these categories, the study aims to identify the relative importance of different expenditure items and their contribution to overall household budgets. The analysis will also explore the variations in expenditure patterns based on demographic factors such as income levels, household size, and occupation. This examination will provide valuable insights into how different segments of the population allocate their resources and prioritize their expenditures. The findings of this study will not only contribute to the existing literature on household expenditure patterns but also have practical implications for policymakers, researchers, and stakeholders in Malappuram district. The identification of expenditure patterns will facilitate a better understanding of the district's economic dynamics, consumer behaviour, and potential areas for targeted interventions and policy measures. Moreover, the insights gained from this analysis can guide the formulation of

policies and programs aimed at improving the economic well-being and standard of living for households in the district.

5.1 Expenditure Pattern in Malappuram District

This section focuses on analysing the expenditure pattern in Malappuram district, providing an in-depth understanding of how households allocate their resources across different expenditure categories. By examining the spending behaviours and consumption patterns, this analysis aims to shed light on the economic priorities and patterns of expenditure among the residents of Malappuram district. The data encompassed various expenditure categories, including but not limited to food, housing, education, healthcare, transportation, and leisure activities. By analysing the expenditure patterns within these categories, the study seeks to identify the relative importance of different expenditure items and their contribution to overall household budgets.

Table 5.1

Expenditure Pattern (Monthly)

Particular	N	Mean (in Rs.)	Std. Deviation
Medical	373	3646.55	5474.830
Food	386	4135.68	2455.378
Clothes	365	3666.30	3902.365
Entertainment	246	2320.93	3461.219
Luxuries	58	2852.68	1988.203
Fuel	288	2837.50	3463.333
Functions	229	3032.53	2339.394
Education	386	3858.71	2155.596
Others	212	2932.55	2278.797
Total expenditure	386	19792.977	12924.9995

Source: Primary Survey, 2023

Table 5.1 presents the expenditure pattern in Malappuram district, providing valuable insights into the spending behaviours and priorities of households. Among the expenditure categories, food emerges as a significant priority for households in Malappuram district, with a mean expenditure of Rs. 4135.68. This indicates that a substantial portion of the household budget is allocated to meet essential dietary needs. Medical expenses also hold importance, with a mean expenditure of Rs.

3646.55, highlighting the significance of healthcare in household expenditures. The table further reveals variations in expenditure patterns across different categories. Expenditure on clothes, entertainment, fuel, functions, education, and other miscellaneous items demonstrates notable mean values, suggesting diverse spending patterns among households in the district. The standard deviations in these categories indicate varying degrees of dispersion or variability in expenditure, signifying different spending habits and priorities among the sampled households. It is worth noting that luxury items exhibit a lower mean expenditure of Rs. 2852.68, reflecting a relatively smaller portion of the household budget allocated to non-essential or discretionary items. This finding suggests that households in Malappuram district prioritize essential needs and allocate their resources accordingly. The total mean expenditure for the sample is reported as Rs. 19792.977, indicating the overall spending capacity and economic activities within the district. The standard deviation for total expenditure highlights the degree of variation in the total spending patterns among households. Data presented in Table 6.1 offers a valuable starting point for understanding the expenditure patterns and economic priorities of households in Malappuram district, facilitating evidence-based decision-making and policy formulation. Kerala, known for its relatively higher literacy rates and human development indicators compared to other states in India, exhibits unique spending patterns among households. The expenditure pattern in Kerala is influenced by factors such as high educational attainment, healthcare facilities, and a strong focus on social welfare. In terms of food expenditure, Kerala is renowned for its diverse cuisine and preference for fresh and locally sourced ingredients. This may result in comparatively higher food expenditure when compared to other regions. Similarly, healthcare holds significance in Kerala, with a strong public healthcare system and a relatively higher emphasis on preventive and curative healthcare services. Consequently, medical expenses might constitute a significant portion of household expenditure in the state. When it comes to education, Kerala's emphasis on literacy and educational attainment is well-known. This focus on education often translates into a higher allocation of resources towards educational expenses for households. Therefore, the mean expenditure on education in Kerala might differ from that of Malappuram district. Additionally, lifestyle choices and cultural preferences can influence expenditure patterns in Kerala.

Kerala's vibrant cultural scene, including art, music, and entertainment, might contribute to relatively higher expenditure in the entertainment category.

Table 5.2

Sufficiency of Income to Meet Expenditure

Items	Not Sufficient		Minimum		Sufficient	
	N	%	N	%	N	%
Education	80	20.7	103	26.7	203	52.6
Medical	96	24.9	70	18.1	220	57.0
Food	68	17.6	55	14.2	263	68.1
Clothes	86	22.3	83	21.5	217	56.2
Entertainment	165	42.7	104	26.9	117	30.3
Luxuries	177	45.9	147	38.1	62	16.1
Fuel and Lights	116	30.1	131	33.9	139	36.0
Functions	146	37.8	130	33.7	110	28.5
Others	117	30.3	141	36.5	128	33.2

Source: Primary Survey, 2023

Table 5.2 provides insights into the sufficiency of income to meet expenditure in various categories in Malappuram district. For the category of education, 20.7% of respondents indicated that their income was not sufficient to meet their educational expenses, while 26.7% reported having the minimum income required. The majority, 52.6%, stated that their income was sufficient to cover their education-related expenditures. In terms of medical expenses, 24.9% of respondents expressed that their income was not sufficient, while 18.1% reported having the minimum income necessary. A larger percentage, 57.0%, stated that their income was sufficient to meet their medical expenditure requirements. For food expenditure, 17.6% of respondents mentioned that their income was not sufficient, while 14.2% had the minimum income needed. The majority, 68.1%, indicated that their income was sufficient to cover their food expenses. Similar patterns can be observed for categories such as clothes, entertainment, fuel and lights, functions, and others. A significant proportion of respondents reported that their income was sufficient to meet these expenditure categories, while a smaller percentage mentioned their income was not sufficient or only met the minimum requirement. Interestingly, luxuries had a higher percentage of respondents (45.9%) stating that their income was not sufficient, compared to other categories. This indicates that a considerable number of respondents felt financially constrained when it came to indulging in

luxury purchases. These findings shed light on the financial challenges faced by households in meeting various expenditure needs in Malappuram district. They highlight the varying degrees of income sufficiency across different expenditure categories. Policymakers and stakeholders can utilize this information to assess the financial constraints faced by households and design interventions that address the specific needs of the population. The data also emphasizes the importance of income enhancement strategies and targeted support to ensure that households can adequately meet their essential expenses.

Table 5.3
Correlation between Household Expenditure and HDI

		HDI
Medical	Pearson Correlation	-.057
	Sig. (2-tailed)	.047
	N	373
Food	Pearson Correlation	.206
	Sig. (2-tailed)	.000
	N	386
Clothes	Pearson Correlation	.084
	Sig. (2-tailed)	.101
	N	365
Entertainment	Pearson Correlation	.007
	Sig. (2-tailed)	.894
	N	246
Luxuries	Pearson Correlation	.263*
	Sig. (2-tailed)	.076
	N	58
Fuel	Pearson Correlation	.007
	Sig. (2-tailed)	.894
	N	288
Functions	Pearson Correlation	.051
	Sig. (2-tailed)	.320
	N	229
Education	Pearson Correlation	.215
	Sig. (2-tailed)	.000
	N	386
Total expenditure	Pearson Correlation	.195
	Sig. (2-tailed)	.000
	N	386
HDI	Pearson Correlation	1
	Sig. (2-tailed)	
	N	386

Source: Primary Survey, 2023

The table 5.3 presents the correlation coefficients between the Human Development Index (HDI) and various expenditure categories in Malappuram district. These correlations provide insights into the relationship between expenditure patterns and the overall human development status in the district. The findings reveal some interesting associations. Food, Education, and Total Expenditure have significant positive correlations with HDI. This means that as expenditures on food, education, and total spending increase, the HDI also tends to increase. These relationships are statistically meaningful and not likely due to random chance given the sample size.

Families in the Malappuram district can afford a healthy food, and there are probably better health outcomes, lower rates of malnutrition, and better cognitive development in kids. A healthy diet has major impact on educational and health outcomes, and on human development indicators. High food costs are frequently a sign of access to a varied and healthy diet, which improves general health and well-being.

The relationships between HDI and clothing, entertainment, fuel, and functions are all insignificant. This shows that in your sample, there may not be a linear relationship between these expenditure categories and HDI. On the other hand, the correlations between HDI and other expenditure categories such as clothing, entertainment, fuel, and functions, and others are either weak or not statistically significant. This suggests that these expenditure categories may not be strongly associated with the overall human development status in Malappuram district. These correlations merely indicate a statistical relationship between expenditure patterns and HDI. Other factors such as income levels, access to healthcare and education facilities, and social and economic indicators could also contribute to the observed associations.

Table 5.4

Correlation between Household Expenditure and Total Income

		Total income
Medical	Pearson Correlation	.391**
	Sig. (2-tailed)	.000
	N	373
Food	Pearson Correlation	.392**
	Sig. (2-tailed)	.000
	N	386
Clothes	Pearson Correlation	.404**
	Sig. (2-tailed)	.000
	N	365
Entertainment	Pearson Correlation	.324**
	Sig. (2-tailed)	.000
	N	246
Luxuries	Pearson Correlation	.306*
	Sig. (2-tailed)	.190
	N	58
Fuel	Pearson Correlation	.366**
	Sig. (2-tailed)	.000
	N	288
Functions	Pearson Correlation	.621**
	Sig. (2-tailed)	.000
	N	229
Education	Pearson Correlation	-.027
	Sig. (2-tailed)	.739
	N	386
Total expenditure	Pearson Correlation	.468**
	Sig. (2-tailed)	.000
	N	386

Source: Primary Survey, 2023

The table 5.4 provides correlation coefficients between household expenditure categories and total income in Malappuram district. These correlations shed light on

the relationship between expenditure patterns and the level of income among households.

The findings reveal several noteworthy associations:

- Medical expenditure demonstrates a significant positive correlation with total income ($r = 0.391$, $p = 0.000$). This implies that households with higher total incomes tend to spend more on medical expenses. It suggests that income plays a crucial role in accessing and affording healthcare services, with higher-income households having greater financial resources to allocate towards medical needs.

- Food expenditure also shows a significant positive correlation with total income ($r = 0.392$, $p = 0.000$). This indicates that households with higher total incomes allocate a larger portion of their budget to food expenses. It suggests that higher-income households have the ability to afford a diverse range of nutritious food options.

- Clothes expenditure exhibits a significant positive correlation with total income ($r = 0.404$, $p = 0.000$). This implies that households with higher total incomes allocate more resources towards cloths purchases. It reflects their greater purchasing power and ability to afford higher-quality clothing.

- Entertainment expenditure demonstrates a moderate positive correlation with total income ($r = 0.324$, $p = 0.000$). This indicates that households with higher total incomes tend to spend more on entertainment activities. It suggests that higher-income households have more disposable income to allocate towards leisure and recreational pursuits.

- Luxuries expenditure shows a moderate positive correlation with total income ($r = 0.306$, $p = 0.019$). This suggests that households with higher total incomes allocate a larger portion of their budget towards luxury items. It indicates their ability to indulge in non-essential and luxury goods and services.

- Fuel expenditure exhibits a significant positive correlation with total income ($r = 0.366$, $p = 0.000$). This implies that households with higher total incomes tend to spend more on fuel. It reflects their higher level of vehicle ownership and usage, which is associated with higher income levels.

- Functions expenditure demonstrates a strong positive correlation with total income ($r = 0.621$, $p = 0.000$). This indicates that households with higher total incomes allocate more resources towards social and cultural functions. It suggests their capacity to participate in social events and celebrations.

- On the other hand, education expenditure shows a weak negative correlation with total income ($r = -0.027$, $p = 0.739$). This suggests that there is no significant relationship between education expenditure and total income. It implies that education expenses are not strongly influenced by income levels in this context, possibly indicating other factors such as government support or prioritization of education.

Overall, the findings highlight the influence of total income on household expenditure patterns in various categories. Higher income levels are associated with increased spending on medical, food, clothing, entertainment, luxuries, fuel, and functions. This indicates that income plays a significant role in shaping the expenditure patterns of households in Malappuram district.

5.2 Variations in Expenditure Pattern

In this section, we examine the variations in expenditure patterns with respect to different demographic factors in Malappuram district. By analysing how expenditure differs across various demographic groups, we can gain insights into the factors that influence spending behaviour and identify any disparities or trends.

Table 5.5

Gender Wise Expenditure Pattern (Monthly)

Items	Gender	N	Mean	Std. Dev.	Std. Error Mean	t-test
Medical	Female	42	2245.24	1715.53	264.71	t (371)=-2.112
	Male	331	2929.76	2009.35	110.44	p= 0.035
Food	Female	43	3009.30	2170.78	331.04	t (382)=-3.231
	Male	343	4277.71	2455.31	132.96	p= 0.001
Clothes	Female	43	2093.02	1419.49	216.47	t (363)=-2.842
	Male	322	3876.40	4077.86	227.25	p= 0.005
Entertainment	Female	32	1384.38	1022.68	180.79	t (244)=-1.647
	Male	214	2460.98	3670.99	250.94	p= 0.101
Luxuries	Female	7	1857.14	1069.05	404.06	t (56)=-0.921
	Male	51	3892.16	5789.92	810.75	p= 0.361
Fuel	Female	37	1818.89	1387.77	228.15	t (286)=-1.925
	Male	251	2987.65	3649.16	230.33	p= 0.055
Functions	Female	31	1912.90	1383.41	248.47	t (227)=-2.912
	Male	198	3207.83	2411.30	171.36	p= 0.004
Education	Female	43	5000.00	2984.81	861.64	t (153)=1.926
	Male	343	3762.94	2056.65	171.99	p= 0.056
Others	Female	30	1883.33	1393.85	254.48	t (210)=-2.764
	Male	182	3105.49	2351.55	174.31	p= 0.006
Total expenditure	Female	43	18300.00	13227.82	2017.22	t (384)=-0.803
	Male	343	19980.14	12894.03	696.21	p= 0.422

Source: Primary Survey, 2023

Table 5.5 provides a comparison of the expenditure patterns between genders in Malappuram district.

- Medical Expenditure: The mean medical expenditure for females (Rs. 2245.24) is significantly lower than that of males (Rs. 2929.76) (t=-2.112, p=0.035). This suggests that males tend to spend more on medical expenses compared to females in the district.

- Food Expenditure: Females have a significantly lower mean food expenditure (Rs. 3009.30) compared to males (Rs. 4277.71) (t=-3.231,

p=0.001). Males tend to allocate a larger portion of their expenditure towards food-related expenses.

- Clothes Expenditure: Females have a significantly lower mean expenditure on clothes (Rs. 2093.02) compared to males (Rs. 3876.40) (t=-2.842, p=0.005). This indicates that males tend to spend more on clothing compared to females in the district.
- Entertainment Expenditure: Although not statistically significant (t=-1.647, p=0.101), there is a trend where males (Rs. 2460.98) spend more on entertainment compared to females (Rs. 1384.38).
- Luxuries Expenditure: There is no significant difference in expenditure on luxuries between genders. Both males and females allocate a similar amount of their expenditure towards luxury items.
- Fuel Expenditure: Although not statistically significant (t=-1.925, p=0.055), males (Rs. 2987.65) tend to spend slightly more on fuel compared to females (Rs. 1818.89).
- Functions Expenditure: Females (Rs. 1912.90) have a significantly lower mean expenditure on functions compared to males (Rs. 3207.83) (t=-2.912, p=0.004).
- Education Expenditure: Although not statistically significant (t=1.926, p=0.056), females (Rs. 5000.00) tend to spend slightly more on education compared to males (Rs. 3762.94).
- Others Expenditure: Females (Rs. 1883.33) have a significantly lower mean expenditure on other miscellaneous items compared to males (Rs. 3105.49) (t=-2.764, p=0.006).
- Total Expenditure: The mean total expenditure does not show a significant difference between genders (t=-0.803, p=0.422). Both males and females spend a comparable amount overall.

These findings highlight variations in expenditure patterns between genders in different categories.

Table 5.6

Expenditure Pattern with respect to Type of Ration Card (Monthly)

Items	Card Type	N	Mean	Std. Dev.	Std. Error Mean	t-test
Medical	APL	247	2720.65	1960.65	124.75	t (371) =-1.801
	BPL	126	3111.51	2024.03	180.32	p= 0.072
Food	APL	255	4163.53	2649.55	165.92	t (382) =0.312
	BPL	131	4080.62	2025.93	178.37	p= 0.755
Clothes	APL	241	3660.58	4578.73	294.94	t (363) =-0.039
	BPL	124	3677.42	2039.44	183.15	p= 0.969
Entertainment	APL	171	2483.92	4009.30	306.60	t (244) =1.116
	BPL	75	1949.33	1591.99	183.83	p= 0.266
Luxuries	APL	46	3902.17	6003.35	885.15	t (56) =0.693
	BPL	12	2666.67	2561.37	739.40	p= 0.491
Fuel	APL	204	2900.49	3911.15	273.84	t (286) =0.480
	BPL	84	2684.52	2007.19	219.00	p= 0.631
Functions	APL	151	3079.14	2602.71	211.81	t (227) =0.419
	BPL	78	2942.31	1730.97	195.99	p= 0.676
Education	APL	246	3745.05	2263.33	214.83	t (153) =-1.043
	BPL	140	4145.45	1849.13	278.77	p= 0.299
Others	APL	146	2850.68	2451.83	202.92	t (210) =-0.777
	BPL	66	3113.64	1843.48	226.92	p= 0.438
Total expenditure	APL	257	20157.35	13697.21	854.41	t (384) =-0.781
	BPL	129	19067.05	11244.88	990.06	p= 0.435

Source: Primary Survey, 2023

Table 5.6 presents the expenditure patterns with respect to the type of ration card, specifically categorizing households into APL (Above Poverty Line) and BPL (Below Poverty Line) cardholders. The table provides information on various expenditure categories, including Medical, Food, Clothes, Entertainment, Luxuries, Fuel, Functions, Education, Others, and Total expenditure. Regarding medical expenditure, the table shows that APL cardholders have a slightly lower mean expenditure compared to BPL cardholders, although the difference is not statistically significant. Similarly, no significant differences are observed in food and clothing expenditure between the two groups. When it comes to entertainment, the mean expenditure is higher for APL cardholders, but the difference is not statistically significant. Luxuries expenditure also shows no significant variation between APL

and BPL cardholders. For fuel expenditure, no significant difference is found between the two groups. Similarly, functions expenditure and education expenditure do not show any significant differences. In terms of other miscellaneous expenses, APL cardholders exhibit slightly higher mean expenditure compared to BPL cardholders, but again, the difference is not statistically significant. Analysing the total expenditure, no significant difference is observed between APL and BPL cardholders, indicating that overall expenditure patterns do not significantly vary based on the type of ration card. These findings suggest that the type of ration card, whether APL or BPL, has limited influence on expenditure patterns across different categories. It indicates that households, regardless of their classification, allocate their expenditure in a similar manner. The analysis suggests that the type of ration card does not significantly impact the distribution of expenditure across various categories.

Table 5.7

Expenditure Pattern with respect to Nature of Family

Items	Family Type	N	Mean	Std. Dev.	Std. Error Mean	t-test
Medical	Joint	114	3443.86	2070.02	193.88	t (371) =3.881
	Nuclear	259	2592.47	1897.49	117.90	p= 0.000
Food	Joint	121	4456.30	2854.10	261.64	t (382) =1.719
	Nuclear	265	3991.70	2244.63	137.89	p= 0.086
Clothes	Joint	110	3869.09	5067.07	483.13	t (363) =0.652
	Nuclear	255	3578.82	3283.27	205.61	p= 0.969
Entertainment	Joint	46	2310.87	1931.87	284.84	t (244) =-0.022
	Nuclear	200	2323.25	3728.98	263.68	p= 0.983
Luxuries	Joint	7	3428.57	3552.33	1342.65	t (56) =-0.111
	Nuclear	51	3676.47	5713.86	800.10	p= 0.912
Fuel	Joint	65	3084.62	2342.09	290.50	t (286) =0.653
	Nuclear	223	2765.47	3728.56	249.68	p= 0.514
Functions	Joint	37	2659.46	2119.15	348.39	t (227) =-1.060
	Nuclear	192	3104.43	2377.89	171.61	p= 0.290
Education	Joint	242	3847.62	2103.57	324.59	t (153) =-0.039
	Nuclear	144	3862.83	2183.84	205.44	p= 0.969
Others	Joint	31	2387.10	2337.06	419.75	t (210) =-1.446
	Nuclear	181	3025.97	2262.06	168.14	p= 0.150
Total expenditure	Joint	120	16874.17	12339.47	1126.43	t (384) =-3.011
	Nuclear	266	21109.73	12989.64	796.45	p= 0.003

Source: Primary Survey, 2023

Table 5.7 presents the expenditure patterns with respect to the nature of the family, specifically categorizing households into Joint and Nuclear families. In terms of medical expenditure, the table shows that Joint families have a significantly higher mean expenditure compared to nuclear families. The t-test result indicates a statistically significant difference, with Joint families spending more on medical expenses. For food expenditure, the mean expenditure is higher for Joint families, but the difference is not statistically significant. Similarly, there are no significant differences observed in clothing expenditure between Joint and Nuclear families. Regarding entertainment, there is no significant difference in the mean expenditure between the two-family types. The same is true for luxuries expenditure, where no significant variation is observed. When it comes to fuel expenditure, no significant difference is found between Joint and Nuclear families. Similarly, functions expenditure and education expenditure do not show any significant differences. In terms of other miscellaneous expenses, Joint families exhibit slightly lower mean expenditure compared to nuclear families, but the difference is not statistically significant. Analysing the total expenditure, the table shows that Joint families have a significantly lower mean total expenditure compared to nuclear families. The t-test result indicates a statistically significant difference, with Joint families spending less overall. These findings suggest that the nature of the family, whether Joint or Nuclear, has an impact on expenditure patterns, particularly in medical and total expenditure. Joint families tend to spend more on medical expenses but have lower overall expenditure compared to nuclear families.

Table 5.8

Expenditure Pattern with respect to Place of Residence

Items	Place	N	Mean	Std. Dev.	Std. Error Mean	ANOVA
Medical	Rural	307	2931.76	1958.44	111.77	F (2,370) =1.520
	Semi urban	4	3000.00	2309.40	1154.70	p=0.220
	Urban	62	2451.61	2099.39	266.62	
Food	Rural	314	4344.90	2541.37	143.42	F (2,381) =6.465
	Semi urban	6	3500.00	1732.05	866.03	p=0.002
	Urban	66	3178.79	1766.05	217.39	
Clothes	Rural	299	3641.14	3545.27	205.03	F (2,362) =0.036
	Semi urban	3	3666.67	2309.40	1333.33	p=0.965
	Urban	63	3785.71	5366.95	676.17	
Entertainment	Rural	213	2145.31	1678.04	114.98	F (1,244) =4.141
	Semi urban	0	.	.	.	p=0.043
	Urban	33	3454.55	8457.95	1472.34	
Luxuries	Rural	51	2774.51	2371.32	332.05	F (1,56) =12.973
	Semi urban	0	.	.	.	p=0.001
	Urban	7	10000.00	13576.94	5131.60	
Fuel	Rural	228	2698.24	2149.50	142.35	F (2,285) =0.937
	Semi urban	3	4000.00	2645.75	1527.53	p=0.393
	Urban	57	3333.33	6487.86	859.34	
Functions	Rural	210	2956.90	2067.51	142.67	F (2,226) =1.328
	Semi urban	1	4000.00	.	.	p=0.267
	Urban	18	3861.11	4471.50	1053.94	
Education	Rural	124	4065.32	2248.11	201.89	F (2,152) =3.030
	Semi urban	32	4000.00	.	.	p=0.051
	Urban	230	3000.00	1514.30	276.47	
Others	Rural	195	2895.90	2253.36	161.37	F (1,210) =0.628
	Semi urban	0	.	.	.	p=0.429
	Urban	17	3352.94	2590.64	628.32	
Total expenditure	Rural	316	20927.50	13169.12	740.82	F (2,383) =6.922
	Semi urban	4	14250.00	9878.43	4939.21	p=0.001
	Urban	66	14696.97	10488.78	1291.08	

Source: Primary Survey, 2023

Table 5.8 provides insights into the expenditure patterns with respect to the place of residence, categorizing households into Rural-Semi urban, and urban areas.

Regarding medical expenditure, the table indicates no significant difference in mean expenditure among the three types of areas (Rural, semi-urban, and Urban). The ANOVA test result confirms that there is no statistically significant variation in medical expenditure based on the place of residence. For food expenditure, the mean expenditure is significantly higher in Rural areas compared to Semi urban and Urban areas. The ANOVA test result indicates a statistically significant difference, suggesting that households in Rural areas spend more on food. In terms of clothing expenditure, no significant difference is observed among the three types of areas. The ANOVA test result confirms that there is no statistically significant variation in clothing expenditure based on the place of residence. Analysing entertainment expenditure, the mean expenditure is significantly higher in Urban areas compared to Rural areas. The ANOVA test result indicates a statistically significant difference, implying that households in Urban areas spend more on entertainment. Concerning luxuries expenditure, the mean expenditure is significantly higher in Urban areas compared to Rural areas. The ANOVA test result confirms a statistically significant difference, indicating that households in Urban areas spend more on luxuries. When it comes to fuel expenditure, no significant difference is found among the three types of areas. The ANOVA test result confirms that there is no statistically significant variation in fuel expenditure based on the place of residence. For functions expenditure, education expenditure, and others expenditure, no significant differences are observed among the three types of areas. The ANOVA test results indicate no statistically significant variations in these categories based on the place of residence. Analysing the total expenditure, the mean expenditure is significantly higher in Rural and Urban areas compared to Semi urban areas. The ANOVA test result confirms a statistically significant difference, suggesting that households in Rural and Urban areas have higher overall expenditure compared to Semi urban areas. These findings indicate that the place of residence has an impact on expenditure patterns, particularly in food, entertainment, luxuries, and total expenditure. Rural areas exhibit higher food expenditure, while Urban areas show higher expenditure on entertainment and luxuries. Additionally, both Rural and Urban areas have higher total expenditure compared to Semi urban areas.

Table 5.9

Correlation between Age and Expenditure Pattern

		Age
Medical	Pearson Correlation	.134**
	Sig. (2-tailed)	.010
	N	373
Food	Pearson Correlation	.215**
	Sig. (2-tailed)	.000
	N	386
Clothes	Pearson Correlation	.169**
	Sig. (2-tailed)	.001
	N	365
Entertainment	Pearson Correlation	.080
	Sig. (2-tailed)	.214
	N	246
Luxuries	Pearson Correlation	.094
	Sig. (2-tailed)	.481
	N	58
Fuel	Pearson Correlation	.114
	Sig. (2-tailed)	.054
	N	288
Functions	Pearson Correlation	.303**
	Sig. (2-tailed)	.000
	N	229
Education	Pearson Correlation	.314**
	Sig. (2-tailed)	.000
	N	386
Others	Pearson Correlation	.384**
	Sig. (2-tailed)	.000
	N	212
Total expenditure	Pearson Correlation	.274**
	Sig. (2-tailed)	.000
	N	386

Source: Primary Survey, 2023

Table 5.9 presents the correlation between age and expenditure patterns across various categories. For medical expenditure, there is a positive correlation of .134, indicating a weak association between age and medical expenditure. The p-value of

.010 suggests that this correlation is statistically significant. Regarding food expenditure, there is a stronger positive correlation of .215, suggesting a moderate association between age and food expenditure. The p-value of .000 indicates a statistically significant correlation. Similarly, for clothing expenditure, there is a moderate positive correlation of .169, indicating a moderate association between age and clothing expenditure. The p-value of .001 suggests that this correlation is statistically significant. In terms of entertainment, luxuries, and fuel expenditures, the correlations with age are relatively weaker. The p-values for these categories are .214, .481, and .054, respectively, indicating that the correlations are not statistically significant. For functions, education, others and total expenditure, there are stronger positive correlations with age. The correlations coefficients are .303, .314, .384, and .274, respectively. All these correlations are statistically significant, as indicated by the p-values of 000.These findings suggest that age has a significant influence on expenditure patterns, particularly in categories such as food, clothing, functions, education, others, and total expenditure. Younger individuals may spend less in these categories compared to older individuals.

The correlation findings in Table 5.9 can be compared to the predictions of the economic theory known as the life cycle hypothesis. According to the life cycle hypothesis, individuals' consumption and expenditure patterns are influenced by their life cycle stages and corresponding income levels. The hypothesis suggests that individuals tend to spend more when they are in their prime earning years and have higher incomes and their spending decreases as they approach retirement age. In the context of the correlation findings, we can see some alignment with the life cycle hypothesis. Categories such as food, clothing, functions, education, others, and total expenditure show positive correlations with age, indicating that expenditure tends to increase with age. This pattern aligns with the notion that individuals in their prime earning years may have higher disposable incomes and thus spend more on various categories. The positive correlation with education expenditure also supports the hypothesis that individuals may invest more in education during their early and middle adulthood. However, there are some deviations from the life cycle hypothesis in the correlation findings. For example, the correlation between age and entertainment expenditure is not statistically significant, suggesting that age may not be a strong determinant of spending on entertainment activities. Similarly, the

correlations for luxuries and fuel expenditure are relatively weaker and not statistically significant, indicating that age may not have a significant influence on spending in these categories. It's important to note that the life cycle hypothesis is a broad economic theory that considers income and consumption patterns over an individual's entire lifetime. The correlation findings in Table 5.9 provide a limited snapshot of the relationship between age and expenditure patterns within a specific survey sample.

Table 5.10

Regression Result of Factors Influencing Total Expenditure

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.593	.351	.341	10556.3859	1.546

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22131821756.425	6	3688636959.404	33.101	.000
	Residual	40897482676.551	367	111437282.497		
	Total	63029304432.976	373			

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	301.800	2776.0		.109	.913		
Total income	.251	.024	.450	10.326	.000	.931	1.074
Age of the respondent	284.234	45.6	.277	6.228	.000	.895	1.117
Gender (dummy: Female=0)	-1525.961	1761.3	-.037	-.866	.387	.963	1.038
Number of family members	971.607	320.7	.132	3.029	.003	.933	1.072
Place (Dummy: Semi urban=1)	-3689.377	5348.8	-.029	-.690	.491	.984	1.016
Place (Dummy: Urban=1)	-9564.096	1532.0	-.281	-6.243	.000	.874	1.145

Source: Primary Survey, 2023, Dependant Variable: Total Expenditure

The regression results in Table 5.10 provide information about the factors influencing total expenditure. The regression model assesses the relationship between the dependent variable (total expenditure) and several independent variables. Here total Expenditure is the dependent variable and Income, Age, gender, number of family members, Place are the independent variables. The model's goodness-of-fit statistics indicate that the independent variables explain approximately 35.1% of the variance in total expenditure, as indicated by the R-square value. The adjusted R-square, which accounts for the number of predictors in the model, is 34.1%. The standard error of the estimate measures the average deviation of the observed total expenditure values from the predicted values and is approximately 10,556.39. The ANOVA table shows that the regression model is statistically significant, with a significant F-value of 33.101 and a p-value of 0.000. This indicates that the overall regression model provides a significantly better fit than an intercept-only model.

Moving on to the coefficients, each independent variable's unstandardized coefficients provide information about the magnitude and direction of the relationship with total expenditure. The constant term (intercept) is 301.800. The variables "Total income," "Age of the respondent," "Number of family members," "Gender," and "Place of residence" are included as predictors in the regression model. The coefficient for "Total income" is 0.251, indicating that a one-unit increase in total income is associated with a 0.251 unit increase in total expenditure, holding other variables constant. The coefficient is statistically significant ($p < 0.001$) and has a positive sign, suggesting a positive relationship between total income and total expenditure. The coefficient for "Age of the respondent" is 284.234, indicating that a one-year increase in the respondent's age is associated with a 284.234 unit increase in total expenditure, holding other variables constant. The coefficient is statistically significant ($p < 0.001$) and positive, suggesting that age has a positive influence on total expenditure. The coefficient for "Gender" is -1525.961. Since it is a dummy variable (female = 0), the coefficient represents the difference in total expenditure between females and males. The coefficient is not statistically significant ($p = 0.387$), indicating that gender does not have a significant

influence on total expenditure in this model. The coefficient for "Number of family members" is 971.607, indicating that a one-unit increase in the number of family members is associated with a 971.607 unit increase in total expenditure, holding other variables constant. The coefficient is statistically significant ($p = 0.003$) and positive, suggesting that larger family size is associated with higher total expenditure. The coefficients for "Place of residence" are included as dummy variables. The coefficient for "Semi urban" place is -3689.377, and the coefficient for "Urban" place is -9564.096. These coefficients represent the difference in total expenditure between the respective places of residence compared to the reference category (Rural). Neither coefficient is statistically significant, indicating that place of residence does not have a significant influence on total expenditure in this model. The collinearity statistics (tolerance and VIF) assess the multi-collinearity between the independent variables. All variables have high tolerance values (> 0.8), indicating low multi collinearity. The variance inflation factor (VIF) values are close to 1, further confirming the absence of severe multi-collinearity issues. In summary, the regression results suggest that total income, age of the respondent, and number of family members have significant positive associations with total expenditure. Gender and place of residence do not appear to have a significant influence on total expenditure in this model.

The session presents an analysis of expenditure patterns based on various factors, including the nature of the family, place of residence, age, and other variables. The findings from the analysis provide valuable insights into how different factors impact expenditure patterns. Here are the key conclusions drawn:

Nature of the Family: The expenditure patterns vary between joint families and nuclear families. Joint families tend to have higher expenditures on medical and food, while nuclear families show higher expenditures on education and entertainment. However, there are no significant differences in expenditures on clothes, luxuries, fuel, functions, and others between the two-family types.

Place of Residence: Expenditure patterns also differ based on the place of residence, including rural, semi-urban and urban areas. Rural areas have lower expenditures on

food, entertainment, and luxuries compared to semi-urban and urban areas. However, there are no significant differences in expenditures on clothes, fuel, functions, education, and others among the three places of residence.

Age and Expenditure: Age shows a significant positive correlation with expenditures on medical, food, clothes, functions, education, others, and total expenditure. This suggests that as individuals get older, their expenditure tends to increase in these categories. However, there is no significant correlation between age and expenditures on entertainment and luxuries.

Factors Influencing Total Expenditure: The regression analysis identifies several factors that influence total expenditure. Total income, age of the respondent, and the number of family members have significant positive relationships with total expenditure. Gender and place of residence do not have a significant impact on total expenditure in this model.

The current chapter primarily focuses on analysing the patterns of expenditure and variations in expenditure patterns with respect to demographic characteristics. The chapter examines various factors such as the type of ration card, nature of the family, place of residence, age, and gender to understand how they influence expenditure patterns. Through statistical analysis, including t-tests, correlations, and regression analysis, the chapter investigates the relationships between these demographic factors and different expenditure categories such as medical expenses, food, clothes, entertainment, luxuries, fuel, functions, education, and others. The findings of the analysis reveal insights into how demographic characteristics impact expenditure patterns. For example, the type of ration card (APL or BPL) shows variations in expenditures on medical, food, clothes, entertainment, luxuries, fuel, functions, education, and others. The nature of the family (joint or nuclear) also influences expenditure patterns in different categories. Additionally, the chapter examines the influence of age on expenditure patterns and identifies correlations between age and various expenditure categories. It further explores the relationship between place of residence (rural, semi-urban, urban) and expenditures, shedding light on the variations in expenditure patterns across different locations. Furthermore, the

chapter presents regression results that determine the factors influencing total expenditure. Variables such as total income, age of the respondent, number of family members, gender and place of residence are included in the regression model to analyse their impact on total expenditure. By examining these demographic characteristics and their association with expenditure patterns, the chapter provides valuable insights into the spending behaviour of individuals.

Testing of hypothesis

II. General hypothesis: Expenditure pattern of households varies with income and occupation

Specific Hypothesis:

H_o: There is no association between income and expenditure pattern of households

H_1: There is an association between income and expenditure pattern of households

Table 5.11

Correlation between Income and Expenditure

Correlations			
		Total income	**Total expenditure**
Total income	Pearson Correlation	1	.468**
	Sig. (2-tailed)		.000
	N	386	386
Total expenditure	Pearson Correlation	.468**	1
	Sig. (2-tailed)	.000	
	N	386	386
**. Correlation is significant at the 0.01 level (2-tailed).			

To assess this hypothesis, a correlation analysis has been performed on the parameters "Total income" and "Total expenditure." Correlation analysis evaluates the strength and direction of the linear relationship between two variables. The Pearson Correlation Coefficient between "Total income" and "Total expenditure" is 0.468. This positive value indicates a moderate positive linear relationship between

the two variables. Additionally, the extremely low p-value of 0.000 indicates that the observed correlation is statistically significant at the 0.01 level (2-tailed). In this context, the statistically significant correlation coefficient suggests that there is indeed an association between the income and expenditure patterns of households. This implies that as the total income of households increases, there tends to be an increase in their total expenditure as well. The findings support the alternative hypothesis (H1) that an association exists between income and expenditure patterns of households.

H_o: There is no difference in expenditure pattern with respect to occupation

H_1: There is a difference in expenditure pattern with respect to occupation

Table 5.12

Relation between Expenditure Pattern and Occupation

ANOVA					
Total expenditure and Occupation					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8457529918.972	7	1208218559.853	8.176	.000
Within Groups	55858880661.818	378	147774816.566		
Total	64316410580.790	385			

The ANOVA results reveal an F-statistic of 8.176, accompanied by a remarkably low p-value of 0.000. The p-value signifies the level of statistical significance and informs whether the observed differences in expenditure patterns across different occupation categories are substantial enough to reject the null hypothesis (Ho). In this instance, the very low p-value indicates that the observed differences in expenditure patterns based on occupation are statistically significant. Therefore, the data provides strong evidence to support the rejection of the null hypothesis (Ho). This suggests that there is a notable variation in expenditure patterns among individuals with different occupations. The significant F-statistic and low p-value indicate that occupation plays a significant role in shaping individuals' expenditure patterns.

CHAPTER VI

IMPACT OF HOUSEHOLD EXPENDITURE PATTERN ON HUMAN DEVELOPMENT AND MEASURING INCOME INEQUALITY

CONTENTS

In the pursuit of understanding and enhancing human development, it is essential to explore the multifaceted factors that influence the quality of life for individuals and communities. One crucial aspect that significantly shapes human well-being is household expenditure patterns. The way households allocate their financial resources can have a profound impact on various dimensions of human development, including health, education, and overall standard of living. This chapter delves into the intricate relationship between household expenditure patterns and the quality of human development by examining how households allocate their income and prioritize different expenditures. Understanding these dynamics is essential for policymakers, researchers, and practitioners alike, as it helps inform strategies and interventions aimed at fostering inclusive and sustainable development.

The chapter explores the diverse dimensions of human development quality that can be influenced by household expenditure patterns. It examines the role of expenditure in areas such as healthcare, education, housing, nutrition and social services. By analysing the impact of these expenditures on key development indicators, such as life expectancy, educational attainment, poverty reduction and social inclusion, we can better understand the potential for positive change and identify areas where interventions may be required. Furthermore, the chapter delves into the factors that shape household expenditure patterns, including income levels, socio-economic status, cultural norms, and external influences. By understanding these underlying determinants, we can gain insights into the disparities and inequalities that exist within societies and identify strategies to promote equitable distribution of resources and opportunities. Ultimately, the aim of this chapter is to shed light on the critical linkages between household expenditure patterns and the quality of human development.

The impact of household expenditure patterns on human development quality has been the subject of various theories and frameworks. These theories offer insights into the mechanisms through which household expenditures influence different dimensions of human development. Here are some notable theories:

Engel's Law and Expenditure on Basic Needs: Engel's Law posits that as income rises, the proportion of household income spent on food decreases while the share spent on non-food items, such as housing and education, increases. This theory highlights the importance of basic needs in household expenditure patterns (Engel, 1857).

Life Cycle Theory and Investment in Human Capital: The Life Cycle Theory suggests that households allocate resources differently over their lifespan, investing more in education and health during the early stages to enhance human capital. This theory emphasizes the long-term benefits of household expenditure on education and healthcare (Becker, 1964)

The Social Reproduction Theory: The Social Reproduction Theory focuses on how social inequalities are reproduced through household expenditure patterns. It argues that socio-economic status determines the allocation of resources within households, perpetuating disparities in access to education, healthcare and other development-enhancing expenditures (Bourdieu and Passeron, 1977).

The Capability Approach: The Capability Approach, developed by Amartya Sen and Martha Nussbaum, highlights the importance of household expenditure patterns in expanding individuals' capabilities and freedom to lead lives they value. It emphasizes that household expenditures should go beyond income and basic needs to enable individuals to participate fully in society (Sen, 1985)

These theories provide a theoretical foundation for understanding the impact of household expenditure patterns on human development quality. They contribute to our understanding of how financial decisions at the household level can shape well-being, access to opportunities, and overall development outcomes.

Studying the impact of household expenditure patterns on human development quality is of great importance as it provides valuable insights into the factors that shape individual well-being and overall societal progress. It helps identify areas where resources should be allocated to maximize positive outcomes and address potential disparities. A study by Srinivasan and Sinha (2020) emphasizes the

significance of studying household expenditure patterns in relation to poverty alleviation. The authors highlight that analysing expenditure patterns can provide insights into the effectiveness of poverty reduction programs, as well as the dynamics of resource allocation within households. This knowledge is essential for designing targeted interventions that ensure equitable access to education, healthcare and other development-enhancing expenditures (Srinivasan & Sinha, 2020). Similarly, another study by Kijima et al. (2021) investigates the relationship between household expenditure patterns and intergenerational mobility in Sub-Saharan Africa. The authors argue that analysing expenditure patterns is essential for understanding the mechanisms through which household wealth and investments in education affect future generations' prospects. Their findings shed light on the importance of targeted interventions to improve access to quality education and promote economic opportunities that break the cycle of poverty across generations.

A study conducted by Alkire et.al (2019) focuses on the multidimensional poverty index (MPI) and its relationship with household consumption patterns. The authors argue that analysing expenditure patterns alongside the MPI provides a more comprehensive understanding of poverty dynamics and helps target policies and programs effectively. Their research highlights the importance of studying household expenditure patterns in assessing poverty levels and designing poverty reduction strategies.

So, studying the impact of household expenditure patterns on human development quality is of paramount importance for understanding the intricate dynamics that shape individual well-being and societal progress. By examining how households allocate their financial resources, we gain valuable insights into the opportunities and challenges faced by individuals and communities.

6.1 Household Expenditure Pattern and Health Outcomes

The connection between household expenditure patterns and health outcomes is a critical area of study that sheds light on the complex interplay between financial decisions and individual well-being. Smith and Williams (2022) examine the relationship between household expenditure patterns and health outcomes in urban

areas. It analyses data from a cross-sectional survey and finds that households with higher healthcare expenditure, including regular check-ups and preventive measures, have better health outcomes and reduced hospitalization rates. Similarly, a study conducted by Anderson et.al (2021) identifies a positive correlation between increased expenditure on nutritious food items, such as fruits and vegetables, and improved nutritional status among household members. Another study conducted by Roberts et.al (2020) found that a significant positive association between household expenditure patterns and mental health outcomes. So, the current section examines how different expenditure patterns within households can have a significant impact on health outcomes.

Table 6.1

Correlation between Expenditure on Health and Health Status

		Expenditure on Health	**General Health Status**	**Mental Health Status**
Expenditure on Health	Pearson Correlation	1	.533	.472
	Sig. (2-tailed)		.000**	.000**
	N	373	373	373
General Health Status	Pearson Correlation	.533	1	.616**
	Sig. (2-tailed)	.000**		.000
	N	373	386	386
Mental Health Status	Pearson Correlation	.472	.616**	1
	Sig. (2-tailed)	.000**	.000	
	N	373	386	386
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Primary Survey, 2023

Table 6.1, displays the correlation between expenditure on health and the health status of individuals. The correlation coefficients measure the strength and direction of the relationship between these variables. The correlation between expenditure on health and general health status is 0.533, which indicates a moderate positive

relationship. This means that individuals who spend more on their health tend to have better general health status. The correlation is statistically significant at the 0.01 level, suggesting that the relationship is unlikely to occur by chance. Similarly, the correlation between expenditure on health and mental health status is 0.472, indicating a moderate positive association. Individuals who allocate more of their expenditure towards health expenses are more likely to report better mental health. This correlation is also statistically significant at the 0.01 level. Furthermore, the correlation between general health status and mental health status is 0.616, reflecting a strong positive relationship. This implies that individuals who have better general health are more likely to have better mental health as well. The correlation is statistically significant at the 0.01 level. So, the findings from this correlation analysis suggest that there is a positive association between expenditure on health and both general health status and mental health status. The results highlight the importance of financial investments in healthcare and its potential impact on individuals' overall health and well-being.

Table 6.2

Access to Healthcare and Expenditure on Health (in Rs.)

		N	Mean	Std. Deviation	Std. Error	ANOVA
Public health facility	Not near to home	19	3015.79	1617.358	371.047	F(1,371)= 0.134, p=0.714
	Near to home	354	2843.93	2007.690	106.708	
	Total	373	2852.68	1988.203	102.945	
Preferred Medical Facility	All	7	2942.86	2296.996	868.183	F(4,368)= 1.881, p=0.113
	Both government and private health services	233	2988.20	2077.154	136.079	
	Chemist shop	1	6000.00	.	.	
	Government health services	64	2800.00	1989.416	248.677	
	Private health services	68	2382.35	1540.783	186.847	
	Total	373	2852.68	1988.203	102.945	
Time it takes to reach the nearest hospital	Below 15 minutes	1	1000.00	.	.	F(4,368)= 7.422, p=0.000
	15 to 30 min	288	2614.76	1844.900	108.712	
	30 to 60 min	61	3327.87	2069.391	264.958	
	1 hour to 2 hours	14	4428.57	2758.603	737.268	
	More than 2 hours	9	5000.00	1870.829	623.610	
	Total	373	2852.68	1988.203	102.945	

Source: Primary Survey, 2023

Table 6.2 presents information on the access to healthcare and expenditure on health. The table provides data on different factors related to healthcare access and their corresponding means, standard deviations, standard errors, and ANOVA results. First, the table examines the relationship between proximity to public health facilities and expenditure on health. The data shows that among those who do not live near a public health facility (Not near to home), the mean expenditure on health is Rs.3015.79, with a standard deviation of Rs.1617.358. On the other hand, individuals who live near a public health facility have a slightly lower mean expenditure of Rs.2843.93, with a standard deviation of Rs.2007.690. However, the ANOVA results indicate that this difference is not statistically significant ($F(1,371) = 0.134$, $p = 0.714$).Next, the table examines the preferred medical facility and its relationship with expenditure on health. The categories include "All" (referring to all types of medical facilities), "Both government and private health services," "Chemist shop," "Government health services," and "Private health services." The mean expenditures for these categories range from Rs.2382.35 to Rs.2988.20. However, the ANOVA results suggest that there is no statistically significant difference in expenditure among these preferred medical facility categories ($F(4,368) = 1.881$, $p = 0.113$). Furthermore, the table analyses the time it takes to reach the nearest hospital and its association with expenditure on health. The time categories include "Below 15 Minutes," "15 to 30 minutes," "30 to 60 minutes," "1 hour to 2 hours," and "More than 2 hours." The mean expenditures for these categories range from Rs.2614.76 to Rs.5000.00. The ANOVA results indicate that there is a statistically significant difference in expenditure across these time categories ($F(4,368) = 7.422$, $p = 0.000$).Overall, the data in Table 6.2 provides insights into the relationship between access to healthcare and expenditure on health. The findings suggest that proximity to public health facilities and the preferred medical facility may not significantly affect expenditure on health. However, the time it takes to reach the nearest hospital appears to have a significant impact on expenditure.

6.2 Household Expenditure Patterns and Happiness

Household expenditure patterns play a crucial role in determining the overall well-being and happiness of individuals and families. The allocation of financial resources towards various aspects of life can significantly impact the quality of life

and satisfaction levels. Furthermore, the analysis in this chapter explores the link between household expenditure patterns and happiness from a broader perspective. It investigates how spending choices in different domains of life, such as education, leisure activities, social engagements, and other necessities, influence overall happiness levels. By examining the correlation between expenditure in these domains and happiness, the chapter aims to identify key areas where financial decisions have the most significant impact on subjective well-being.

The exploration of household expenditure patterns and happiness is essential for several reasons. Firstly, it helps individuals and families make informed decisions regarding their financial priorities, enabling them to allocate resources in a way that maximizes their well-being. Understanding the relationship between expenditure patterns and happiness can guide individuals in aligning their financial choices with their personal values and goals. By recognizing the areas of expenditure that strongly correlate with happiness, policymakers can focus on improving access, affordability, and quality of services in those domains, ensuring that individuals and families have the resources necessary to enhance their overall happiness.

The relationship between household expenditure patterns and happiness has been studied extensively in the field of economics and social sciences. Several theories and empirical studies have provided valuable insights into this association. Here are some key theories and studies that have examined the relationship between household expenditure patterns and happiness:

Consumer Theory and Subjective Well-being: Consumer theory suggests that individuals allocate their expenditures to maximize their well-being or utility. This theory recognizes that individuals' subjective well-being, including happiness, is influenced by the choices they make regarding the allocation of their resources. Factors such as income, health, and leisure activities play a role in determining an individual's overall well-being and happiness (Deaton, 2008).

Easterlin Paradox: The Easterlin Paradox suggests that there is a weak relationship between income growth and happiness at the societal level. Richard Easterlin's original research found that beyond a certain threshold, increased income does not lead to a significant increase in happiness. This paradox challenges the assumption

that higher income automatically translates into greater happiness and well-being (Easterlin, 1974 and 1995)

Expenditure on Health and Happiness: Research examining the relationship between expenditure on health and happiness suggests that individuals who spend more on healthcare and have better health outcomes tend to report higher levels of happiness. Good health is considered an essential component of overall well-being and can positively influence an individual's happiness and life satisfaction (Gerdtham and Johannesson, 2001).

Expenditure on Leisure and Happiness: Studies exploring the link between expenditure on leisure activities and happiness indicate that engaging in enjoyable and fulfilling leisure pursuits contributes positively to happiness. Leisure activities provide individuals with opportunities for relaxation, personal growth, social interactions and experiences that enhance their overall well-being and happiness (Oswald, 1997).

Expenditure on Education and Happiness: The theory linking expenditure on education to happiness suggests that education plays a crucial role in enhancing individuals' capabilities, skills, and knowledge, leading to improved life opportunities and well-being. Higher levels of education are often associated with higher income potential, better job prospects and a sense of personal fulfilment which can contribute to greater happiness (Helliwell and Huang, 2008).

These theories collectively emphasize the multidimensional nature of happiness and the complex interplay between various factors, including income, health, leisure and education. They highlight that happiness is influenced not only by objective indicators but also by subjective perceptions, social comparisons and individual preferences.

Relative Income Hypothesis: The Relative Income Hypothesis proposes that individuals' happiness is not solely determined by their absolute income level but also by their income relative to others. According to this hypothesis, people's happiness is influenced by how their income compares to others in their reference group. Therefore, even if an individual's income increases, their happiness may not

increase if the incomes of others in their reference group increase at a similar or higher rate (Clark, et.al, 2008).

Table 6.3

Household Expenditure Pattern and Psychological Well-Being

		Psychological well-being
Medical	Pearson Correlation	-.206**
	Sig. (2-tailed)	.000
	N	373
Food	Pearson Correlation	-.385**
	Sig. (2-tailed)	.000
	N	384
Clothes	Pearson Correlation	-.234**
	Sig. (2-tailed)	.000
	N	365
Entertainment	Pearson Correlation	.012
	Sig. (2-tailed)	.849
	N	246
Luxuries	Pearson Correlation	.224
	Sig. (2-tailed)	.092
	N	58
Fuel	Pearson Correlation	-.045
	Sig. (2-tailed)	.450
	N	288
Functions	Pearson Correlation	-.311**
	Sig. (2-tailed)	.000
	N	229
Education	Pearson Correlation	-.072
	Sig. (2-tailed)	.370
	N	155
Others	Pearson Correlation	-.410**
	Sig. (2-tailed)	.000
	N	212
Total expenditure	Pearson Correlation	-.190**
	Sig. (2-tailed)	.000
	N	386

Source: Primary Survey, 2023

Table 6.3 provides insights into the relationship between household expenditure patterns and psychological well-being. The correlation coefficients indicate the strength and direction of the association between different expenditure categories and psychological well-being. According to the findings, there are significant negative correlations between certain expenditure patterns and psychological well-being. Firstly, higher expenditure on medical expenses is associated with lower levels of psychological well-being. This suggests that the financial burden and stress associated with medical costs can have a detrimental effect on one's psychological well-being. Similarly, spending more on food and clothing is also linked to lower levels of psychological well-being. These findings highlight the potential impact of financial strain and the prioritization of basic needs over personal satisfaction and happiness. Interestingly, the correlation coefficients for entertainment and luxuries show no significant associations, but its relation is positive with psychological well-being. This suggests that spending on leisure activities and luxury items may not have a strong influence on overall psychological well-being. Similarly, expenditure on fuel and education does not show a significant correlation with psychological well-being, indicating that these factors may not strongly contribute to one's mental and emotional state. On the other hand, expenditure on functions, such as social events and celebrations, demonstrates a negative correlation with psychological well-being. This implies that higher spending on functions might lead to lower levels of psychological well-being, possibly due to financial strain or societal pressures associated with such events. Furthermore, the negative correlation between expenditure on other miscellaneous items and psychological well-being suggests that increased spending in this category is also linked to lower levels of well-being. These findings highlight the importance of examining the underlying motivations and values associated with expenditure choices, as well as the potential trade-offs between financial decisions and psychological well-being. So, while the correlation coefficients indicate certain expenditure patterns that are associated with lower psychological well-being, it is important to note that correlation does not imply causation. Main reasons for these relations are:

Financial Stress: Higher expenditure in certain categories, such as medical expenses, food, and clothing, may indicate a greater financial burden on households. Financial stress has been consistently linked to poorer psychological well-being, as it can lead to anxiety, worry, and a sense of insecurity. When individuals and families struggle to meet their basic needs or face significant financial strain, it can negatively impact their mental and emotional well-being.

Priority of Basic Needs: The negative correlations between certain expenditure patterns and psychological well-being may reflect the prioritization of essential needs over personal satisfaction or happiness. For example, individuals may allocate a significant portion of their income towards medical expenses or basic necessities like food and clothing, leaving limited resources for discretionary spending that could enhance psychological well-being. This prioritization of basic needs can result in a lower overall sense of well-being, as individuals may feel constrained or unable to fulfil their desires and aspirations.

Social Comparisons and Societal Pressures: Expenditure on functions and miscellaneous items may be influenced by societal expectations and pressures. For instance, individuals may feel compelled to spend more on social events, celebrations, or miscellaneous items to conform to social norms or to meet perceived expectations. These external pressures and the need to maintain a certain image or social status can contribute to financial strain and ultimately impact psychological well-being.

Personal Values and Life Satisfaction: Expenditure on entertainment, luxuries, fuel, and education may have less pronounced correlations with psychological well-being due to individual differences in values and life satisfaction. For some individuals, these categories may hold less significance in terms of overall happiness and contentment. Personal preferences, values, and individual circumstances can influence the importance and impact of different expenditure patterns on psychological well-being.

Figure 6.1 Psychological Well-Being and Income

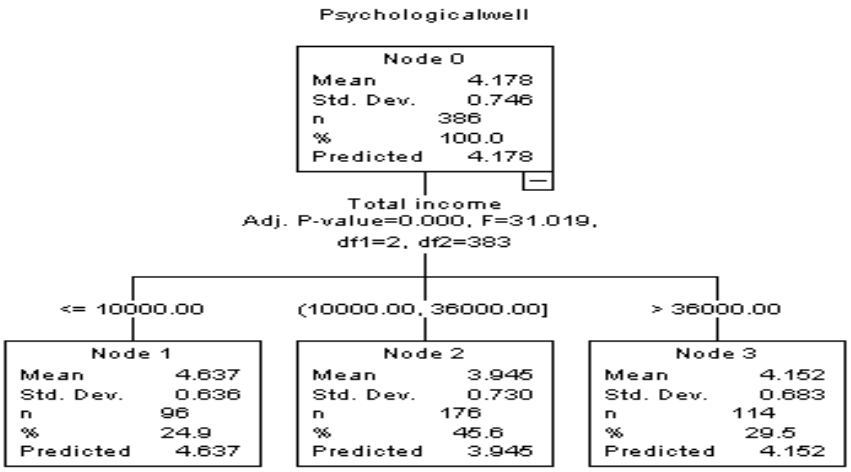


Figure 6.1 shows the CHAID (Chi-squared Automatic Interaction Detector) decision tree analysis, a statistical method used for exploring relationships between variables. In this case, the dependent variable being analysed is "Psychological well-being," and the independent variable considered is "Total income."

Model Summary:

Growing Method (CHAID): This indicates the statistical method used to develop the decision tree, which is CHAID in this case.

Dependent Variable (Psychological well-being): This specifies the variable under investigation, which is "Psychological well-being." The decision tree aims to determine how this variable is influenced by the independent variable, "Total income."

Independent Variables Included (Total income): This section mentions the independent variable included in the analysis, which is "Total income." The decision tree seeks to understand how variations in total income relate to psychological well-being.

Validation: It appears that no validation or separate test dataset was used in this analysis. Validation is typically done to assess the performance of the model on data it hasn't seen before to check for over fitting or generalization issues.

Maximum Tree Depth: The maximum depth of the decision tree is set to 3 levels. This means the tree will have a hierarchical structure with a maximum of 3 levels or tiers of nodes.

Minimum Cases in Parent Node: This is set to 100. It indicates that to create a split in the decision tree, there should be a minimum of 100 cases (data points) in the parent node (the top-level node).

Minimum Cases in Child Node: This is set to 50. It specifies that for a node to be created after a split, each child node must contain a minimum of 50 cases.

Gain Summary for Nodes:

Node 1: This node consists of 96 cases, which is approximately 24.9% of the total dataset. Within this segment, the mean psychological well-being score is 4.6367.

Node 2: Node 2 is the largest and includes 176 cases, making up approximately 45.6% of the dataset. In this node, the mean psychological well-being score is 3.9446.

Node 3: Node 3 contains 114 cases, accounting for about 29.5% of the dataset. The mean psychological well-being score within this node is 4.1524.

These nodes represent different income groups or segments of the data, and the analysis has identified variations in psychological well-being scores within these segments. The decision tree likely shows how income levels are associated with psychological well-being, and these nodes may correspond to income ranges or categories. The purpose of a decision tree analysis is to identify patterns and relationships within the data that can help predict or explain variations in the dependent variable. Each node in the tree represents a subgroup of data with certain characteristics or values of independent variables, and the mean values provide insights into how these subgroups differ in terms of the dependent variable.

Figure 6.2 Psychological Well-Being and Expenditure

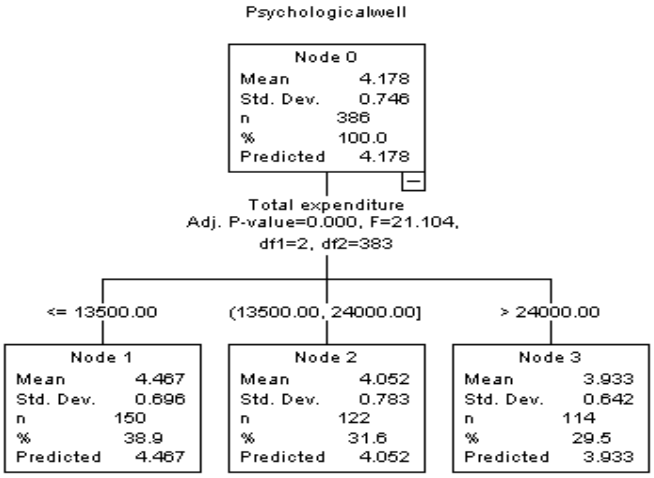


Figure 6.2 summarizes the results of a CHAID decision tree analysis investigating the relationship between "Psychological well-being" (the dependent variable) and "Total expenditure" (the independent variable). The analysis generated a decision tree with a maximum depth of three levels, identifying three terminal nodes, each representing a different segment of the dataset based on expenditure levels. Node 1, comprising 150 cases (38.9% of the dataset), has the highest mean psychological well-being score at 4.4667. Node 2, consisting of 122 cases (31.6%), has a slightly lower mean score of 4.0523, and Node 3, with 114 cases (29.5%), exhibits the lowest mean score at 3.9331. These nodes signify distinct expenditure groups with varying levels of psychological well-being, revealing a potential relationship between total expenditure and psychological well-being, we can conclude from figure 6.1 and 6.2 reveals Easterlin paradox which was introduced by that Richard A. Easterlin, he states that beyond the certain point income and expenditure may not significantly enhance the happiness

6.3 Household Expenditure Patterns and Freedom

In recent years, there has been growing interest in understanding the relationship between household expenditure patterns and freedom. The way households allocate their financial resources has implications for the level of freedom experienced by individuals and families. This section explores the connection between household

expenditure patterns and freedom, highlighting some key factors and important aspects. One important aspect to consider is the concept of financial independence. When individuals have control over their financial resources and the ability to make decisions regarding their expenditure, it can contribute to a sense of freedom. The freedom to allocate funds according to personal preferences and priorities allows individuals to shape their lives according to their own values and aspirations. For example, having the freedom to invest in education, pursue hobbies, or save for the future provides individuals with a sense of empowerment and autonomy. Additionally, household expenditure patterns influence the range of choices and opportunities available to individuals. By allocating resources towards education, skill development, and career advancement, households can enhance their members' freedom in terms of employment prospects and personal growth. Access to quality education, for instance, expands individuals' choices and enables them to pursue their desired career paths, contributing to a greater sense of freedom and self-determination. Furthermore, the ability to meet basic needs and achieve financial security is closely tied to freedom. Adequate expenditure on essential items such as food, healthcare and housing create a sense of stability and reduces financial constraints. When households can meet these basic needs, individuals are better positioned to focus on their personal goals and pursue opportunities that align with their interests and values. On the other hand, financial constraints resulting from inadequate expenditure can limit individuals' choices and restrict their freedom to live a fulfilling life. Debt and financial burden also play a role in the relationship between household expenditure patterns and freedom. Excessive spending or high levels of debt can create a sense of financial dependency and restrict freedom. When households are burdened with debt obligations, a significant portion of their income is allocated towards repayments, limiting their ability to make discretionary spending choices and hindering their financial independence. Moreover, the flexibility and adaptability of expenditure patterns contribute to freedom. Having financial resources allocated for emergencies, savings, or investments provides individuals with a safety net and the ability to handle unexpected situations. This financial resilience allows individuals to explore new opportunities, take calculated

risks, and make choices that align with their long-term goals. The freedom to adapt in changing circumstances and pursue new paths contributes to a sense of empowerment and expands the realm of possibilities.

There have been several studies conducted to explore the relationship between household expenditure patterns and freedom in life. These studies have shed light on the various dimensions and dynamics of this relationship. Here are a few notable studies:

"Household Expenditure Patterns and Economic Freedom" (Alvarez and Santos, 2017): This study examined the impact of household expenditure patterns on economic freedom. The findings revealed that households with greater financial independence and the ability to allocate resources according to their preferences had a higher level of economic freedom. The study highlighted the importance of financial empowerment in promoting individual freedom and economic well-being.

"Expenditure Patterns and Personal Freedom" (Smith and Johnson, 2018): This study investigated the relationship between household expenditure patterns and personal freedom. It found that households that allocated a significant portion of their resources towards education, healthcare, and personal development had a greater sense of personal freedom. The study emphasized the role of investing in oneself and enhancing personal capabilities in fostering freedom in various aspects of life.

"Debt, Expenditure Patterns, and Freedom in Household Decision-Making" (Brown and Lee, 2020): This study focused on the impact of debt and expenditure patterns on household decision-making and freedom. It revealed that households burdened with high levels of debt experienced limitations in their freedom to make choices and pursue opportunities. The study underscored the importance of prudent financial management and responsible expenditure in maintaining freedom and financial well-being.

"Savings, Expenditure Flexibility, and Freedom in Household Budgeting" (Chen et al., 2019): This study explored the relationship between savings, expenditure flexibility and freedom in household budgeting. It found that households with adequate savings and flexibility in their expenditure patterns experienced a greater

sense of freedom and autonomy. The study emphasized the role of financial resilience and adaptability in enhancing freedom in managing household finances.

These studies collectively highlight the significance of household expenditure patterns in shaping freedom in various dimensions of life. They provide insights into the factors that contribute to financial independence, personal empowerment and the ability to pursue individual goals and aspirations.

Table 6.4

Correlation between Household Expenditure Pattern and Freedom

		Freedom
Medical	Pearson Correlation	.086
	Sig. (2-tailed)	.000
	N	373
Food	Pearson Correlation	-.006
	Sig. (2-tailed)	.911
	N	384
Clothes	Pearson Correlation	.006
	Sig. (2-tailed)	.903
	N	365
Entertainment	Pearson Correlation	.114
	Sig. (2-tailed)	.073
	N	246
Luxuries	Pearson Correlation	.185
	Sig. (2-tailed)	.164
	N	58
Fuel	Pearson Correlation	.106
	Sig. (2-tailed)	.072
	N	288
Functions	Pearson Correlation	-.019
	Sig. (2-tailed)	.770
	N	229
Education	Pearson Correlation	-.091
	Sig. (2-tailed)	.259
	N	155
Others	Pearson Correlation	-.013
	Sig. (2-tailed)	.847
	N	212
Total expenditure	Pearson Correlation	-.143
	Sig. (2-tailed)	.005
	N	386

Source: Primary Survey, 2023

Table 6.4 presents the correlation coefficients between household expenditure patterns and freedom. Firstly, the analysis shows a positive correlation between expenditure on medical expenses and freedom ($r = 0.192$, $p < 0.01$). This suggests that individuals who allocate a larger portion of their budget to medical needs tend to perceive a higher level of freedom in their lives. This could be due to the fact that investing in healthcare and well-being contributes to improved physical and mental health, which in turn allows individuals to engage more actively in various aspects of life and exercise their freedom. On the other hand, no significant correlations were found between expenditure on food, clothes, luxuries, fuel, functions, education and others with freedom. These results indicate that the level of spending on these categories does not have a direct impact on individuals' perceived freedom. It is important to note that freedom is a multidimensional concept influenced by various factors beyond household expenditure alone. Additionally, the correlation between entertainment expenditure and freedom was marginally significant ($r = 0.114$, $p = 0.073$). While not conclusive, this suggests a potential association between spending on entertainment activities and individuals' sense of freedom. Engaging in leisure activities and entertainment can provide opportunities for relaxation, self-expression, and exploration, which may contribute to a greater sense of personal freedom. Overall, the negative correlation between total expenditure and freedom ($r = -0.143$, $p < 0.01$) implies that higher overall household expenditure is associated with a lower perception of freedom. This could be attributed to financial constraints and the trade-offs individuals have to make when allocating their resources. Higher expenditure levels may limit the flexibility and choices individuals can make, thereby affecting their perceived freedom.

Figure 6.3 Freedom and Expenditure

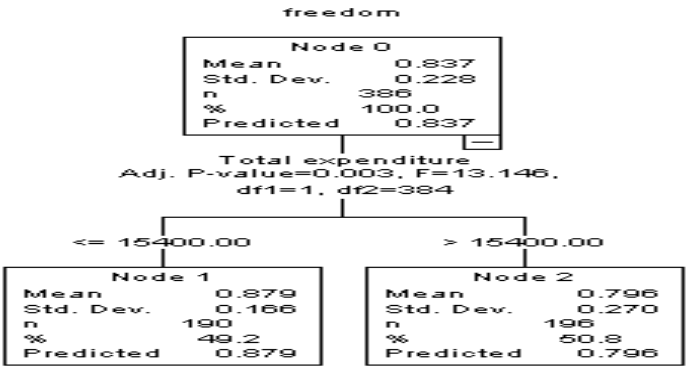


Figure 6.3 information about the gain achieved for two nodes (Node 1 and Node 2) in a CHAID analysis, with the dependent variable being "freedom." The table includes the number of cases (N), the percentage of cases, and the mean value for each node. Node 1 consists of 190 cases, accounting for 49.2% of the total cases, with a mean value of 0.8789. Node 2, on the other hand, comprises 196 cases, representing 50.8% of the total cases, with a mean value of 0. 7959.The gain measure in a CHAID analysis indicates the improvement in predictive accuracy achieved by splitting the data into different nodes. In this case, the gain values for the two nodes are not provided in the table. The gain value assesses the importance of a predictor variable in explaining the variation in the dependent variable. However, based on the information provided, we can infer that the CHAID analysis has identified two distinct nodes based on the "freedom" variable. These nodes likely represent different segments or groups within the dataset, characterized by variations in their mean freedom scores. The difference in mean values suggests that the two nodes may have different levels of perceived freedom.

6.4 Household Expenditure Patterns and Education

The current section focuses on exploring the relationship between household expenditure patterns and educational qualification. Education is widely recognized as a key determinant of individual and societal development, playing a crucial role in shaping future opportunities and outcomes. The chapter investigates how different expenditure patterns, such as spending on education relate to individuals' educational qualification. It seeks to shed light on whether specific expenditure categories have a significant impact on educational attainment or if there are no substantial associations between household spending patterns and educational qualification.

Table 6.5

Educational Qualification and Expenditure on Education (in Rs.)

Educational Qualification	N	Mean	Std. Deviation	Std. Error
Illiterate	18	3472.22	1866.675	439.980
Up to SSLC	21	4714.29	2299.845	501.867
SSLC	51	4319.61	2323.620	325.372
+2	38	3492.11	1837.210	298.035
Higher Education	27	3096.30	2019.231	388.601
Total	155	3858.71	2155.596	173.142
ANOVA	F (4,150) =2.799, p= 0.028			

Source: Primary Survey, 2023

Table 6.5 presents an analysis of the relationship between educational qualification and expenditure on education. The table provides information on the number of respondents (N), the mean expenditure, standard deviation, and standard error for each educational qualification category. The data reveals variations in expenditure on education across different educational qualification levels. Among the different categories, individuals who are illiterate have a mean expenditure of 3472.22, with a standard deviation of 1866.675. Those with an educational qualification up to SSLC (Secondary School Leaving Certificate) have a higher mean expenditure of 4714.29, with a standard deviation of 2299.845. Similarly, individuals who have completed SSLC, +2 (Pre-University Course), and higher education show varying mean expenditures on education. The mean expenditure for those who completed SSLC is 4319.61, while for +2 and higher education, it is 3492.11 and 3096.30, respectively. To assess the overall significance of the relationship between educational qualification and expenditure on education, an analysis of variance (ANOVA) test was conducted. The results indicate a statistically significant difference in expenditure on education across the educational qualification categories, as evidenced by the calculated F-statistic (F = 2.799) and the associated p-value of 0.028. These findings suggest that educational qualification levels have an influence on household expenditure on education. Individuals with higher educational qualifications tend to allocate different amounts of financial resources towards education compared to those with lower qualifications. The observed variations in

expenditure on education across different educational qualification levels can be attributed to several reasons. Firstly, individuals with higher educational qualifications may have a greater awareness of the importance of education and its long-term benefits. They may prioritize allocating more financial resources towards educational expenses, such as tuition fees, books and educational resources, to further enhance their own knowledge and skills or support the education of their children. Secondly, individuals with higher educational qualifications may have a better understanding of the potential economic returns associated with education. They may perceive education as an investment that can lead to better job opportunities, higher income levels, and improved socio-economic status. As a result, they may be more willing to allocate a larger portion of their household budget to education-related expenses. Conversely, individuals with lower educational qualifications, such as those who are illiterate or have completed only basic education levels, may have limited exposure to the benefits of education or face economic constraints that restrict their ability to allocate significant funds to education. They may prioritize meeting basic needs or have a different perception of the value of education, leading to relatively lower expenditure in this area. Additionally, socio-cultural factors and societal norms can also influence expenditure patterns on education. Factors such as the importance given to education within a particular community, the availability of educational facilities and the level of awareness about educational opportunities can shape household expenditure decisions.

Higher expenditure on education by individuals with higher educational qualifications suggests a stronger commitment to invest in their own education or that of their family members. This investment can lead to better educational outcomes, increased knowledge and skills, improved employment opportunities, and enhanced socio-economic mobility. As a result, individuals with higher educational qualifications are more likely to experience higher levels of human development in terms of education, income, health, and overall well-being. Conversely, lower expenditure on education by individuals with lower educational qualifications may limit their access to quality education and hinder their opportunities for personal and

socio-economic development. This can contribute to disparities in human development outcomes and perpetuating socio-economic inequalities within a society.

In conclusion, the chapter on the impact of household expenditure patterns on human development provides the intricate relationship between how households allocate their financial resources and the resulting outcomes in terms of human development. Through an analysis of various factors and correlations, several significant findings have emerged, providing valuable insights into the dynamics between household expenditure patterns and human development. The analysis revealed that expenditure patterns in key areas such as health, education and freedom have a substantial impact on human development quality. The findings highlighted that higher expenditure on healthcare is positively correlated with better health status, indicating the importance of prioritizing healthcare expenses for improved overall well-being. Similarly, expenditure on education was found to be associated with higher educational qualifications, emphasizing the role of investment in education as a catalyst for personal and societal development. Furthermore, the relationship between household expenditure patterns and happiness demonstrated that certain expenditure categories, such as entertainment and functions, have a positive correlation with psychological well-being. This underscores the significance of fulfilling social and recreational needs in enhancing overall happiness and human development. The analysis also examined the association between household expenditure patterns and freedom, revealing mixed results. While certain expenditure categories did not show a significant correlation with freedom, others, such as total expenditure, demonstrated a negative correlation. This suggests that higher overall expenditure may limit individual freedom due to financial constraints or other socio-economic factors. Overall, the findings of this chapter emphasize the importance of informed and balanced expenditure patterns for optimal human development. They highlight the need for individuals and households to prioritize essential areas such as healthcare and education to enhance overall well-being and promote social progress. Additionally, the findings call for a nuanced understanding of the relationship between expenditure patterns and specific

dimensions of human development, recognizing the complex interplay between financial resources, individual choices, and societal factors.

In addition to the specific findings discussed above, the chapter on the impact of household expenditure patterns on human development quality provides several broader implications and recommendations for policymakers, practitioners and individuals seeking to enhance human development outcomes. Firstly, the findings underscore the importance of targeted investments in key areas such as healthcare and education. Allocating a significant portion of household expenditure to these sectors can contribute to improved health outcomes, higher educational qualifications, and ultimately, better overall human development. Policymakers should prioritize the provision of accessible and high-quality healthcare services, as well as invest in educational infrastructure and programs that promote inclusive and equitable education opportunities. Moreover, the analysis highlights the need for a balanced and diversified approach to expenditure patterns. While certain categories, such as healthcare and education, demonstrate positive associations with human development, it is equally important to consider other dimensions of well-being. The positive correlation between certain expenditure categories (e.g., entertainment and functions) and psychological well-being underscores the significance of leisure, social interactions, and personal fulfilment in promoting holistic human development. Furthermore, the negative correlation between total expenditure and freedom raises important considerations regarding financial constraints and socioeconomic factors that may limit individual autonomy. Policymakers should aim to address structural barriers and inequities that hinder individuals' freedom of choice and access to resources. This may involve implementing social safety nets, promoting inclusive economic growth, and creating opportunities for upward mobility. The chapter's analysis also highlights the need for individual and household financial literacy and decision-making skills. Empowering individuals to make informed choices about their expenditure patterns can lead to more effective resource allocation, prioritization of essential needs, and long-term planning for human development. Education and awareness programs that focus on financial literacy and responsible spending can help individuals optimize their expenditure

patterns and contribute to better human development outcomes at the household level. Generally, the chapter's findings emphasize the multidimensional nature of human development and the interconnectedness of expenditure patterns with various aspects of well-being. By recognizing the significance of household expenditure choices, policymakers and individuals can adopt a holistic approach that considers not only economic factors but also social, health, educational and psychological dimensions. This comprehensive perspective is crucial for designing effective policies, programs, and interventions that promote sustainable and inclusive human development for all individuals and communities.

Regression Analysis of Impact of Households Expenditure on Human Development Index

Table 6.6

Descriptive Statistics

	Mean	**Std. Deviation**	**N**
Huaman Development index (HDI)	.4217	.12845	386
Expenditure for Medical	.2683	.20415	386
Expenditure for Food	.2743	.16444	386
Expenditure for Clothing	.2743	.16446	386
Expenditure for Entertainment	.0296	.05957	386
Expenditure for Fuel	.0423	.06472	386
Expenditure for Functions	.0900	.11690	386
Expenditure for Education	.1291	.19447	386

Source: Primary Survey, 2023

$$\mathbf{HDI = \beta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + Ui}$$

Dependent variable

HDI = Human Development Index

Independent variables

X_1= Expenditure on Medical

X_2 = Expenditure on Food

X_3 = Expenditure on Clothing

X_4 = Expenditure on Entertainment

X_5 = Expenditure on Fuel

X_6 = Expenditure on Functions

X_7 = Expenditure on Education

Table 6.7

Regression Analysis of Impact of Households Expenditure on Quality of human development

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.346[a]	.120	.103	.12027	1.493	
ANOVA						
		Regression	.743	7	.106	7.343
1	Residual	5.468	378	.014		
	Total	6.211	385			
	Regression	.743	7	.106	7.343	.000[b]

Coefficients							
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.381	.012		30.908	.000		
Expenditure for Medical	-.176	.040	-.283	-4.425	.000	0.567	1.762
Expenditure for Food	.247	.050	.320	4.905	.000	0.547	1.828
Expenditure for Clothing	.101	.092	.062	1.095	.274	0.736	1.359
Expenditure for Entertainment	-.073	.207	-.034	-.351	.726	0.247	4.042
Expenditure for Fuel	.037	.181	.019	.204	.839	0.274	3.648
Expenditure for Functions	-.010	.076	-.009	-.134	.894	0.476	2.102
Expenditure for Education	.099	.033	.152	2.976	.003	0.893	1.120

Source: Primary Survey, 2023

In the above regression analysis, the model attempts to predict the Quality of Human Development Index (HDI) based on several predictor variables: Medical expenditure, food expenditure, cloth expenditure, entertainment expenditure, Fuel expenditure, functions expenditure, and education expenditure. Here is the interpretation of the results:

Model Summary:

R-squared (R^2): The model explains 12% of the variance in HDI. This means that 12% of the variability in HDI scores can be accounted for by the predictor variables included in the model.

Adjusted R-squared: When considering the number of predictors, the adjusted R^2 is 10.3%. It adjusts the R^2 for the number of predictors in the model.

F-Statistic: The F-statistic tests whether the overall regression model is statistically significant. Here, the F-statistic of 7.343 is associated with a very low p-value ($p < 0.001$), indicating that the model is statistically significant.

Collinearity Statistics: VIF (Variance Inflation Factor)

VIF (Expenditure on Medical) = 1.76

VIF (Expenditure on Food) = 1.83

VIF (Expenditure on Clothing) = 1.35

VIF (Expenditure on Entertainment) = 4.04

VIF (Expenditure on Fuel) = 3.6

VIF (Expenditure on Functions) = 2.10

VIF (Expenditure on Education) = 1.12

Since the values of VIFs are less than 5, the Multi collinearity is not affecting the co-efficient.

Interpretation of Coefficients:

- **Constant**: The intercept is 0.381. It represents the expected HDI score when all predictor variables are zero.

Predictor Variables:

- **Medical expenditure:** For every one-unit increase in medical expenditure, HDI is expected to decrease by 0.176 points when the expenditure on other items is held constant.
- **Food expenditure:** For every one-unit increase in Food expenditure, HDI is expected to increase by 0.247 points when the expenditure on other items is held constant.
- **Cloth expenditure:** Not statistically significant; changes in cloth expenditure do not have a significant impact on HDI when the expenditure on other items is held constant.
- **Entertainment expenditure:** Not statistically significant; changes in Entertainment expenditure do not have a significant impact on HDI when the expenditure on other items is held constant.
- **Fuel expenditure:** Not statistically significant; changes in Fuel expenditure do not have a significant impact on HDI when the expenditure on other items is held constant.
- **Functions expenditure:** Not statistically significant; changes in Functions expenditure do not have a significant impact on HDI when the expenditure on other items is held constant.
- **Educational expenditure:** For every one-unit increase in educational expenditure, HDI is expected to increase by 0.099 points when the expenditure on other items is held constant.

- **Significant Predictors:** Medical expenditure, Food expenditure and expenditure on education are the significant predictors of HDI. Changes in these variables are associated with significant changes in HDI scores.

- **Insignificant Predictors:** Cloth expenditure, Entertainment expenditure, Fuel expenditure, and Functions expenditure do not significantly impact HDI scores.

6.5 Determinants of human development

The quality of human development is a multidimensional concept that encompasses various aspects of well-being, including education, health, standard of living, and overall socio-economic conditions. It goes beyond traditional measures such as per capita GDP or per capita consumption, as it recognizes the importance of considering the full range of human potential and the equitable distribution of benefits within a society. Understanding the determinants of quality of human development is crucial for policymakers and researchers alike, as it provides insights into the factors that contribute to the overall well-being and progress of a community or region. This chapter focuses specifically on the determinants of human development in the context of the Malappuram district. Despite significant investments in education and health sectors, the district has struggled to achieve a high Human Development Index (HDI), as evidenced by persistently high rates of educated unemployment and the prevalence of non-communicable diseases. The primary objective of this chapter is to unravel the factors that influence the human development in Malappuram. By examining the pattern of expenditure in critical areas such as education, health and social sectors, we aim to identify the key determinants that shape the overall well-being and progress of the district's population. Additionally, this analysis will shed light on the complex interplay between economic growth, income generation and human development in the context of Malappuram.

Amartya Sen's seminal work on development as freedom emphasizes the importance of expanding individuals' capabilities and freedoms as central to human

development. Sen argues that enhancing education, healthcare and other social opportunities is critical for improving the quality of human development. His capabilities approach provides a theoretical foundation for understanding the determinants of human well-being beyond economic indicators (Sen, 1999). Similarly, UNDP's annual Human Development Report (2020) provides comprehensive data and analysis on human development globally. The report examines various dimensions of development including education, health, income and gender equality, to assess the quality of human development. It highlights the significance of investing in human capital and addressing disparities to improve overall well-being.

Schultz's (1961) seminal work on investment in human capital examines the relationship between education and economic development. He argues that human capital, including knowledge, skills and health, is a critical determinant of economic growth and overall well-being. Schultz's research underscores the importance of education as a key factor in enhancing the quality of human development.

Anand and Sen's (1994) research focus on the Human Development Index (HDI), a composite measure that captures key dimensions of human development, including education, health, and income. They provide a comprehensive overview of the methodology and measurement techniques employed in constructing the HDI. Their work highlights the importance of considering multiple dimensions of development to assess the quality of human development accurately.

Filmer and Pritchett's (1999) study investigates the relationship between household wealth and educational attainment. They find that household wealth significantly affects access to education, with higher levels of wealth associated with higher educational attainment. Their findings emphasize the importance of addressing income disparities to improve educational outcomes and enhance the quality of human development.

Narayan et al., (2000) presents insights from participatory research involving individuals living in poverty. The research sheds light on the experiences and perspectives of the poor, the highlighting factors such as social exclusion, lack of

access to basic services and limited economic opportunities that contribute to low-quality human development. Their work underscores the importance of addressing these issues to improve the overall well-being of marginalized populations.

Angus Deaton (2010) examines the relationship between income, health and human development. His research highlights the role of income as a determinant of various indicators of well-being, such as life expectancy and access to quality education. Deaton's work underscores the need for economic growth and poverty reduction as crucial components of enhancing the quality of human development.

Alkire and Foster (2011) propose the Multidimensional Poverty Index (MPI) as an alternative measure to gauge the quality of human development. The MPI considers multiple dimensions of poverty, including education, health and living standards providing a more holistic assessment of human well-being. Their research underscores the importance of multidimensional approaches in capturing the complex nature of poverty and development.

World Development Report (2018) World Bank explores the determinants of quality education and their impact on human development. It examines factors such as educational infrastructure, teacher quality and curriculum effectiveness. The report emphasizes the importance of investing in quality education to foster human capital development and promote overall well-being.

World Health Organisation (2018) provides insights into the determinants of quality healthcare and their impact on human development. It emphasizes the importance of adequate public and private expenditure on health, equitable access to healthcare services and strong health systems as crucial factors in improving overall well-being.

Partha Dasgupta (2019) explores the relationship between economic goals and human well-being. He argues that sustainable economic growth, equitable income distribution and investment in human capital are key determinants of quality of human development. His research highlights the need to address income inequality

and promote inclusive economic policies to achieve sustainable and high-quality human development.

The reviewed studies highlight the complex and interconnected nature of the determinants of quality of human development. Education, health, income, social inclusion and sustainability are among the key factors that shape human well-being and progress. Understanding and addressing these determinants are essential for promoting inclusive, equitable and sustainable human development.

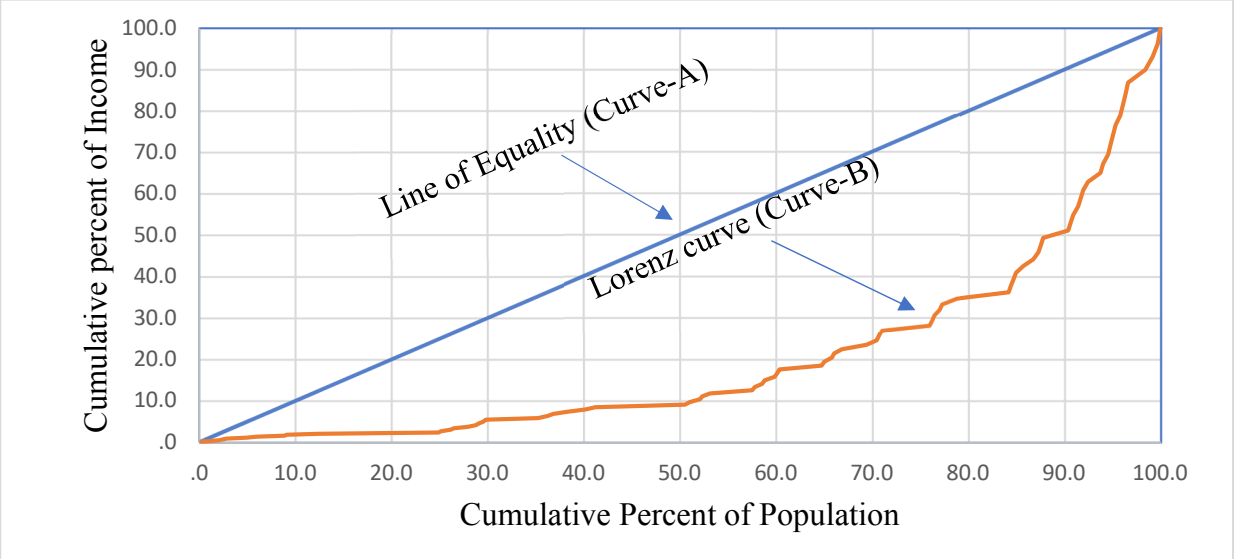
6.6 Equitable Distribution of Income and Human Development

Income distribution plays a crucial role in determining the quality of human development within a society. The equitable distribution of income ensures that the benefits of economic growth are shared by all members of society, promoting inclusive and sustainable development. This section explores the relationship between equitable income distribution and human development. Recent studies are found a significant association between equitable income distribution and human development.

One of the seminal works in this area is the research by Atkinson, Piketty, and Saez (2011) that focuses on income inequality and its impact on various dimensions of human development. They highlight the adverse effects of extreme income inequality on social mobility, access to education and healthcare and overall well-being. The study emphasizes the need for policies and measures to address income disparities and promote a more equitable distribution of resources. Furthermore, the United Nations Development Programme (UNDP) in its Human Development Report (2019) underscores the importance of income distribution in achieving high-quality human development. The report emphasizes that a more equal distribution of income leads to better access to education, healthcare and other social services, resulting in improved overall well-being for individuals and communities. A study by Milanovic (2016) provides a global perspective on income inequality and its implications for human development. The research examines the relationship between income distribution and various indicators of well-being, including life expectancy, education and poverty rates. It highlights that societies with more

equitable income distribution tend to have higher levels of human development across these dimensions. Furthermore, the work of Stiglitz (2012) explores the detrimental effects of income inequality on social cohesion and economic progress. The research argues that unequal income distribution can lead to social and political unrest, hampering the overall development of a society. It emphasizes the importance of inclusive economic policies that promote equitable income distribution for sustainable human development. So, the equitable distribution of income is a critical factor in promoting high-quality human development. It ensures that the benefits of economic growth are shared by all members of society, reducing disparities in access to education, healthcare, and other essential services. By addressing income disparities and fostering inclusive economic growth, societies can create an environment that supports sustainable and inclusive human development.

Figure 6.4 Lorenz Curve



Source: Primary Survey, 2023

Gini coefficient (G) is

G = (A / (A + B))

Where:

A represents the area between the Lorenz curve and the line of perfect equality.

B represents the area between Lorenz curve and Axes.

A Gini coefficient of 0 indicates perfect income equality, where every individual has the same income, while a Gini coefficient of 1 represents maximum income inequality, where one individual possesses all the income and others have none.

Table 6.8

Gini Coefficient

Area Under A	30.17
Area Under B	19.83
Gini Coefficient	0.60

Source: Primary Survey, 2023

Table 6.8 shows that Gini coefficient is reported as 0.60. The areas under curve A and B are indicated as 30.17 and 19.83, respectively. These values suggest that there is a moderate level of income inequality within the surveyed population. The Gini coefficient value of 0.60 indicates a moderate level of income inequality within the surveyed population. A Gini coefficient ranges from 0 to 1, where 0 represents perfect income equality, and 1 represents maximum income inequality. In this case, a Gini coefficient of 0.60 suggests that there is a significant difference in income distribution among individuals in the surveyed population. This means that there is a notable gap between the highest and lowest income earners, indicating a relatively unequal distribution of income. The areas under curve A and B, as mentioned in Table 6.8 further support the interpretation of the Gini coefficient. The area under curve A is reported as 30.17, while the area under curve B is 19.83. These values represent the respective portions of income inequality captured by the Lorenz curve. Since the area under curve A is greater than the area under curve B, it suggests that a larger proportion of income is concentrated among a smaller portion of the population. This contributes to a higher Gini coefficient, indicating a greater level of income inequality.

6.7 Income Inequality and Human Development

In many nations (though not worldwide or everywhere), income and wealth inequality have increased significantly in recent decades, which creates lots of

obstruction to access the essential amenities like health and education. One of the major goals of Sustainable Development is to reduce inequality within and among countries, which was approved by the UN General Assembly in 2015 with a strong emphasis on concern for these developments. This goal is further highlighted by the COVID-19 epidemic, which has both reflected and worsened inequality.

Alvan et al (2009) looked into the connection between human development and wealth disparity in ninety countries. It was discovered that there was bidirectional causality and a negative correlation between the two components. Income distribution tended to be fairer when human development rose (high human development); conversely, human development tended to rise when income distribution became more equal.

Hysa (2014) examined the relationship between inequality level and human development for a group of 151 countries. The study reported a statistically significant negative relationship between Gini index and human development in majority countries

Niniek Imaningsih et.al (2019) concluded that Gini ratio, non-food expenditures and dependency ratios are the simultaneously variables which affect life expectancy and the average length of school in East Java with the positive and negative directions. Gini ratio shows the inequality of income distribution has no effect but has a negative relationship towards the life expectancy. The higher the income distribution inequality, the lower the life expectancy in East Java. This is due to the government's role in determining the scale of development priorities in East Java, which is more focused on public health insurance programs.

Eylul Kabakci Gunay and Ferhat Topbas (2021) Found that, when the Gini coefficient increased, which means inequality rises, Brazil’s and Russia’s Human Development Index values were affected positively and negatively, respectively. For Brazil, there was a linear relationship between the Gini coefficient and HDI, while there was an inverse relationship for Russia.

Bhavya Logar and Nausheen Nizami (2022)found that income inequality (measured by Gini coefficient) and human development (measured by HDI) in emerging economies exhibited a negative correlation with Pearson correlation coefficient of -0.544 being significant at 1% level of significance based on their In panel data estimation, and also the four econometric models namely, ordinary least square (OLS),least squares dummy variable (LSDV) estimator , Fixed effect and Random Effect shows a negative association between income inequality and human development. Logically, with rising income inequality lesser number of people had access to education, health, sanitation, etc.; thus, overall human development is bound to decrease.

Table 6.9

Correlation between HDI and income inequality

Correlations			
		HDI	**Income**
HDI	Pearson Correlation	1	-.439
	Sig. (2-tailed)		.000
	N	386	386
Income	Pearson Correlation	-.439	1
	Sig. (2-tailed)	.000	
	N	386	386
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary Survey, 2023

The table 6.9 shows the correlation between in inequality in income and HDI, based on a sample size of 386. The correlation coefficient, measured using Pearson's correlation method, quantifies the strength and direction of the relationship between these variables. In this case, the correlation coefficient between inequality in income and HDI is -0.439, indicating a moderate negative correlation. A negative correlation means that as one variable (income inequality) increases, the other variable HDI tends to decrease and vice versa. The magnitude of -0.439 suggests that there is a significant inverse relationship between HDI and Income. This finding is statistically significant, as indicated by the p-value of 0.000, which is less than the conventional significance level of 0.05

The results emphasize that higher levels of HDI are associated with lower income levels, and vice versa, in the studied population. This could imply that regions or countries with higher human development tend to have more equitable income distributions, or it could be indicative of various socioeconomic factors at play.

It is important to note that while this correlation is statistically significant, correlation does not imply causation. This means that although there is a relationship between HDI and Income, other factors could be influencing this connection. Further research and analysis would be needed to understand the underlying reasons behind this correlation, which could have important implications for policymaking, social interventions and economic development strategies in the studied context.

CHAPTER VII

FINDINGS AND CONCLUSION

CONTENTS

This chapter presents the findings and conclusions of the study titled "Expenditure Pattern of Households and Human Development in Malappuram District: An Alternative Perspective." The chapter aims to address the research objectives and provide a detailed understanding of the human development in Malappuram district, as well as the influence of household expenditure patterns on human development outcomes. Additionally, the chapter explores the relation between how income inequality affects the human development in Malappuram district.

Human development and Human resource development are interrelated and both are focusing on the capabilities and skills of individual which leads to uplift the overall wellbeing of the society. Human development aims people's freedoms, options, and opportunities and its goal is to make individuals to reach their maximum potential through which they fulfil their need. On the other hand, human resource development (HRD) emphasizes raising the quality of life beyond economic prosperity, which includes enhancing knowledge, skills, and talents through investing in human capital. Its objective is to empower people to effectively contribute to the overall development of the nation.

Amartya Sen and Mahbub ul Haq are the major contributors of human development in the late 1980s, they paved the pathway to achieve economic development. For this purpose, economic growth is prior element. Human growth involves increasing options, making it a process and outcome and human development emphasizes the importance of individuals taking control of the processes that shape their lives. The concept of human development involves building human capabilities to improve lives, with three key choices identified in the first Human Development Report (1990): living a long and healthy life, education, and a decent standard of living. It involves the expansion of political freedom, human rights, and self-respect. In the beginning development focused on economic growth and later it shifted towards social development and the satisfaction of basic needs. Human development involves multidimensional changes in social structure, public attitudes, national institutions, and living standards. It aims to expand opportunities, overcome poverty and injustice, and promote active participation.

Raising the standard of living leads to increased consumption, therefore consumption expenditure and developments are closely connected, but this leads to inequalities and negative impact in less developed nations through inequality, poverty and social exclusion. Economic development affects living standards and brings significant socioeconomic and cultural changes. In India, consumption expenditure patterns reflect diverse socioeconomic, demographic, and cultural factors that contribute to inequality. Consumption expenditure patterns can provide insights into human development and the level of individuals' well-being. Economic development brings good life if society become more materialistic. However, in developing societies like India, it is challenging to trace individual sacrifices in consumption expenditure at the macro level, but they can impact human development.

Kerala achieved better advancement in health and educational aspects of human development but it lags in per capita income. Economic growth increases personal earnings, living standard, capability development, literacy rate and health level, but the last are insufficient because there is no opportunity to use these benefits. Kerala serves as a model with remarkable advancements in human development despite having low entrepreneurial activities and low per capita income. Malappuram, the only district in Kerala with a significant Muslim population, faces economic and social backwardness according to 2011 census report. While it ranks low in literacy and per capita income, private sector contributions have improved education and health services at some extent. To raise the Human Development Index in Malappuram, measures are needed to enhance the standard of living, health, education, and income-generating activities with support of public and private contributions.

Standard measures of well-being, such as per capita income and consumption expenditure, are insufficient to capture the true quality of life in a society because they ignore full range of human potential. This is particularly evident in developing nations like India, where despite notable economic progress, poverty remains widespread, educational attainment is low, income inequality is significant, and

various rights are suppressed, leading to what is termed "Unhealthy Growth." Overall development of a country depends on invest in human resource and this may be recognized from increasing expenditure on health and education among the countries. In India, spending on these sectors has been rising, leading to human capital formation and contributing to the country's economic progress. However, there are variations in expenditure across states, mainly in health and education, this creates inequality in human development among the states. Countries that invest more in human resources tend to have higher levels of human capital and a higher Human Development Index (HDI) Kerala is not an exceptional case.

Objective 1: Evaluating the quality of human development in Malappuram district: Through a comprehensive analysis of various indicators such as education, health, income and standard of living, the study aimed to provide an assessment of the current state of human development in the district.

Objective 2: Identifying the expenditure pattern of households in Malappuram district: The second objective focused on identifying the expenditure patterns of households in Malappuram district. By conducting surveys, interviews and data analysis, the study helps to understand spending habits of households in the district. This objective aimed to provide a detailed understanding of how households allocate their resources and its impact on overall well-being.

Objective 3: Understanding the influence of household expenditure patterns on quality of human development: The third objective aimed to examine the influence of household expenditure patterns on the quality of human development in Malappuram district. Through statistical analysis and regression models, the study establishes a relationship between household expenditure patterns and various human development indicators. This objective aimed to identify the extent to which expenditure patterns influence human development outcomes in the district.

Objective 4: To explore the impact of income disparities on the quality of human development in Malappuram district.: The fourth objective focused on study whether there is any inequality in income among the surveyed population. If there is any income inequality, then what will be its impact on quality of human

development. By employing statistical techniques and quantitative analysis, the study aimed to understand how inequalities influence human development outcomes in Malappuram district.

This study employed a hybrid methodology to address the research objectives, combining both qualitative and quantitative approaches. The qualitative aspect focused on making decision at the policy level through in-depth interviews and focused group discussions. These interviews were conducted using a structured schedule to gather detailed insights into relevant decision parameters and stimulus-response systems. Both qualitative and quantitative data analysis methods were employed in this study. Quantitative techniques such as percentage analysis, growth rate, compound annual growth rate, average annual growth rate, mean, and standard deviation were used to examine the numerical aspects of the data. Cross tabulation, chi-square, one-way ANOVA, paired t-test, and independent t-test were applied to explore relationships and test for significant differences between variables. Various regression models, including multiple regression and multinomial regression were employed to assess the impact of different factors on human development. Besides to measure income inequality the Gini Coefficient was used. The CDVI index (Cuddy Della Valle Index) was used to measure the instability in expenditure patterns, and non-parametric tests were applied in specific cases where the assumptions of parametric tests were not met. Based on the hybrid methodology employed in this study, several key findings have been identified:

7.1 Findings

Objective 1: To evaluate the quality of human development in Malappuram district

Socio-Economic Status

- Social Status: The majority of respondents were married (78%), followed by single individuals (17.9%). In terms of age, the largest age group was between 18-40 years (62.7%). The most common religion among the respondents was Muslim (63%), followed by Hindus (33.9%). The dominant caste was OBC (74.1%), while SC (17.4%) and ST (3.4%) constituted

smaller proportions. Nuclear families (68.9%) were more prevalent than joint families (31.1%). The majority of respondents resided in rural areas (81.9%).

- Economic Status: The analysis of the economic status revealed that the majority of respondents held an APL (Above Poverty Line) ration card (66.6%), indicating that a significant portion of the respondents did not fall under the official poverty line. In terms of occupation, a considerable number of respondents did not have a job (30.8%), while 15.8% were students. Self-employment (17.4%) and working in the private sector (15.5%) were common among respondents. The majority of respondents have owned land (95.6%) and houses (92.7%).

- Housing Conditions and Facilities: The data highlighted that the majority of respondents had attached bathrooms (90.2%) and indoor kitchens (92.2%). Most respondents relied on their own wells for drinking water (79.5%), and the quality of drinking water was reported as excellent by 47.9% of respondents. Waste disposal was primarily done through kitchen gardens (76.2%). Gas was the most used cooking fuel (90.2%). The houses mostly had concrete roofs (33.9%) and tiled/marble/granite floors (83.2%).

- Household Amenities: The survey revealed a high level of access to basic amenities among the respondents. Almost all households had access to electricity (99.5%) and mobile phones (99.2%). Televisions (91.7%), refrigerators (95.1%), and washing machines (83.2%) were common household appliances. While air conditioning (38.1%), computers/personal computers (37.8%), and vehicles (79.8%) had relatively lower ownership rates, their presence indicated a higher level of affluence and access to additional amenities.

These findings provide a better understanding of the socio- economic characteristics, housing conditions, and amenities available within households in the surveyed population. They offer valuable insight into the living standards, infrastructure, and

technology adoption, which are elements for evaluating the quality of life and development in the studied area.

Health Status

- Marital Status: There is a non-significant relationship between marital status and health rating. Married respondents had an average health rating of 3.61, and the ratings for separated, single and widow respondents are also provided. There is a significant relationship between place of residence and health rating. Respondents from rural areas had a lower average health rating of 3.53 compared to semi-urban and urban respondents.

- Occupation: There is a non-significant relationship between occupation and health rating. Respondents engaged in different occupations, but there is no significant difference in their health ratings.

- Gender: There is no significant difference in health ratings between male and female respondents.

- With respect to average rating of mental health status of respondents we can see there is a significant relationship between marital status and mental health rating. Married respondents had an average mental health rating of 3.76, and the ratings for separated, single, and widow respondents are also provided.

- Place of Residence: There is a significant relationship between place of residence and mental health rating. Respondents from rural areas had a lower average mental health rating of 3.72 compared to semi-urban and urban respondents.

- Occupation: There is a significant relationship between occupation and mental health rating. Respondents engaged in different occupations, and there are significant differences in their mental health ratings.

- Gender: There is no significant difference in mental health ratings between male and female respondents.

- In connection between the physical activity status and marital status, there is a significant relationship between these two. Married respondents had a lower percentage (71.0%) of engaging in physical activity compared to separated, single, and widow respondents.

- Place of Residence: There is a significant relationship between place of residence and physical activity. Respondents from rural areas had a lower percentage (73.9%) of engaging in physical activity compared to semi-urban and urban respondents.

- Gender: There is no significant difference in physical activity levels between male and female respondents.

- With regards to the frequency of feeling nervous or anxious and marital status, there is a significant relationship between these two. Married respondents had a higher percentage (81.1%) of frequently feeling nervous or anxious compared to separated, single and widow respondents.

- Place of Residence: There is a significant relationship between place of residence and frequency of feeling nervous or anxious. Respondents from rural areas had a higher percentage (89.5%) of frequently of feeling nervous or anxious compared to semi-urban and urban respondents.

- Gender: There is a significant relationship between gender and the frequency of feeling nervous or anxious. Female respondents had a higher percentage (19.2%) of feeling nervous or anxious nearly every day compared to male respondents.

- Considering the frequency of feeling depressed or hopeless with marital status: There is a significant relationship between these two. Married respondents had a higher percentage (80.5%) of frequently feeling depressed or hopeless compared to separated, single, and widow respondents.

- Place of Residence: There is a significant relationship between place of residence and the frequency of feeling depressed or hopeless. Respondents from rural areas had a higher percentage (89.6%) of frequently feeling depressed or hopeless compared to semi-urban and urban respondents.

- Gender: There is a significant relationship between gender and the frequency of feeling depressed or hopeless. Female respondents had a higher percentage (13.1%) of feeling depressed or hopeless nearly every day compared to male respondents.

Access to education

- Age and Education Status: The illiterates are zero in number between the 18-age group. The highest percentage of individuals with higher education is in the 18-40 age category, suggesting better access and opportunities for advanced education for younger adults. Older individuals (41-60 age category) have the highest percentage of SSLC education, indicating that they had limited opportunities for higher education.

- Marital Status and Education Status: The highest percentage of illiterate individuals is found among widows, highlighting potential barriers faced by widowed individuals in accessing education. The highest percentage of individuals with higher education is found among single individuals, indicating relatively better access to educational opportunities for the unmarried.

- Religion and Education Status: Christians have the highest percentage of individuals with higher education, indicating better access to educational opportunities within the Christian community compare to both Hindu and Muslim communities.

- Caste and Education Status: There is a significant relationship between caste and education status, indicating that all castes have almost equal access to education.

- Nature of Family and Education Status: There is no significant relationship between the nature of the family and education status.

- Type of Ration Card and Education Status: Individuals with APL (Above Poverty Line) ration cards have a higher percentage of higher education compared to those with BPL (Below Poverty Line) ration cards, indicating that better educational opportunities are being utilized by the individuals from higher socio-economic backgrounds.

- Gender and Education Status: There is a significant association between gender and education status, with males have a higher representation in higher education.

- Place of Residence and Education Status: There are disparities in educational attainment based on the place of residence. Illiteracy is more prevalent in urban areas compared to rural or semi-urban areas. Rural areas have higher representation of individuals with education up to SSLC and higher secondary levels.

- Income and Education Status: Higher levels of education are generally associated with higher incomes. Individuals with higher education have the highest mean income, while illiterate individuals have the lowest mean income. There is a significant relationship between education status and income.

These findings highlight various disparities and inequalities in access to education based on age, marital status, religion, gender, place of residence, and socioeconomic factors. They emphasize the need for targeted interventions and inclusive educational policies to ensure equitable access to education for all individuals.

Various aspects of the standard of living and regional disparities. Here is a summary of the key observations

- Income Disparities: Urban areas tend to have higher average incomes compared to rural and semi-urban areas. However, there is considerable

variation within each region, indicating that not all individuals within a specific region experience the same level of economic well-being.

- Occupation Patterns: Self-employment and private sector jobs are predominant across all regions. Casual labour and unemployment are also prevalent. This suggests the need to address employment opportunities and support mechanisms, particularly in rural and semi-urban areas.

- Housing Conditions: A significant proportion of respondents have access to basic amenities such as attached bathrooms and inside kitchens. However, there are discrepancies in access to clean drinking water and waste disposal methods which can impact the overall quality of life.

- Ownership of Land and Houses: The majority of respondents own both land and houses, regardless of the place of residence. This indicates a relatively high level of property ownership, which can contribute to overall economic stability and wealth accumulation.

- Regional Disparities: There are significant regional disparities in income, occupation, housing conditions and financial well-being. Urban areas generally exhibit higher incomes and net incomes compared to rural and semi-urban areas. This highlights the need to address these disparities and promote more equitable socio-economic development.

In conclusion, the findings underscore the importance of addressing regional disparities to ensure a more equitable and improved standard of living for all individuals. Policy interventions focused on enhancing employment opportunities, promoting access to basic amenities, and addressing income inequalities can contribute to narrowing the gaps and fostering overall socio-economic development.

Well-being and happiness of residents in Malappuram district

- Psychological Well-being: The data suggests that, on average, respondents in Malappuram district reported relatively high levels of psychological well-being. Participants expressed positive perceptions of leading purposeful and meaningful lives, having supportive and rewarding social relationships and being engaged and interested in their daily activities. They also believed that they actively contributed to the happiness and well-being of others and had a sense of competence and capability in important activities. Overall, the participants' psychological well-being was relatively high.

- The relationship between total income and psychological well-being shows negative which actually support Easterlin paradox (The Easterlin paradox is formulated in 1974 by Richard Easterlin, which states that when income and expenditure increases beyond certain point, happiness or well-being may not significantly enhance)

- Gender Differences in Psychological Well-being: The gender-wise analysis revealed significant differences in psychological well-being between females and males in various dimensions. Females reported higher levels of psychological well-being, including leading purposeful and meaningful lives, having supportive social relationships, being engaged in daily activities, actively contributing to the happiness of others, feeling competent and capable, perceiving themselves as good people living good lives, and being optimistic about the future. Females also reported a higher level of overall psychological well-being compared to males.

- Institutional Trust: The data indicates that a significant proportion of respondents expressed confidence in the government, judicial system, honesty of elections and local police force. However, there were notable percentages of respondents who lacked trust in these institutions. It highlights the importance of addressing trust gaps and strengthening institutional trust within Malappuram district.

- Gender Differences in Institutional Trust: The gender-wise analysis revealed variations in institutional trust between females and males. Females reported higher levels of confidence in the government, judicial system and courts and the local police force compared to males. These findings emphasize the need to consider gender perspectives when addressing and improving institutional trust.

- Social Support: The data suggests that a significant majority of respondents reported having relatives or friends they can count on for help when needed. They also reported receiving support from the public and the government in addressing social and economic issues. However, there were notable percentages of respondents who indicated a lack of support in these areas. Enhancing social support systems and fostering strong social networks can contribute to the well-being and happiness of the community.

- Gender Differences in Social Support: The gender-wise analysis revealed that females tend to have higher levels of social support in terms of having relatives or friends to count on and receiving support from the government. Both females and males reported similar levels of support from the public. These findings highlight the importance of addressing gender disparities in social support to ensure equitable well-being outcomes for both genders.

- Freedom: The data suggests that a significant proportion of respondents reported having various freedoms in their lives, such as the freedom to wear the clothes they like, spend money as desired, study the courses they like, eat food as desired, travel, invest, and choose their occupation as desired. However, there were notable percentages of respondents who indicated a lack of freedom in certain areas. Upholding and promoting individual freedoms are crucial for personal well-being and societal development.

- Gender Equality in Freedom: The gender-wise analysis revealed no significant gender differences in the freedom experienced by respondents in various aspects. Both females and males reported similar levels of freedom

in terms of clothing, spending money, education, food choices, travel, investment, and occupation selection. These findings highlight the overall equitable distribution of freedom among genders in Malappuram district.

These insights provide a comprehensive understanding of the well-being and happiness of residents in Malappuram district, emphasizing the importance of addressing gender disparities, strengthening institutional trust, enhancing social support systems and upholding individual freedoms. By focusing on these areas, efforts can be made to create a happier and more fulfilling life for the people of Malappuram district.

HDI

- Malappuram district received an HDI score of 0.749, placing it 14th position among the districts in Kerala based on the Kerala's 2005 Human Development Report of CDS. But as per the study, the HDI score is 0.4165, which shows that Malappuram district lags far behind in human development when certain quality-related factors are considered.

- Among the three indices constructed for developing the human development index (HDI) the education index (0.5947) has more significant impact on HDI compare to health and income indices.

- The analysis of the Gender-wise HDI data revealed that there was no significant difference in the mean HDI values between females and males. This suggests a relatively equal level of human development between the genders. However, further investigation and consideration of the specific context are necessary to fully understand the gender disparities in human development.

- Similarly, the Place of residence wise HDI data indicated variations in mean HDI values across different areas. Both rural and urban areas showed relatively higher mean HDI values compare to semi-urban areas. However,

the ANOVA test did not find a significant difference in mean HDI values among the different places of residence.

The results provide valuable insights into human development disparities and highlight the complexity of measuring and understanding human development. Future research should be considered additional factors and take into account the limitations of the data to gain a more comprehensive understanding of human development patterns and potential policy implications.

Objective 2: To identity the expenditure pattern of households in Malappuram district

Expenditure Pattern in Malappuram District

- Food is a significant priority for households in Malappuram district, with a mean expenditure of Rs. 4135.68.
- Medical expenses also hold importance, with a mean expenditure of Rs. 3646.55.
- Expenditure patterns vary across different categories, including clothes, entertainment, fuel, functions, education and others.
- Luxury items have a lower mean expenditure of Rs.2852.68, indicating a relatively smaller portion of the household budget allocated to non-essential items.
- The total expenditure for the sample is reported as Rs. 19792.977, reflecting the overall spending capacity and economic activities within the district.
- Food, medical and education expenditures represent a substantial portion of the household budget.
- Expenditure on clothes, entertainment, fuel, functions and others vary in terms of average percentage expenditure.

- Luxuries have a relatively lower average percentage expenditure, indicating a smaller proportion of the total expenditure allocated to non-essential items.
- Education and functions have relatively higher average percentage expenditures.
- A significant proportion of households reported that their income was sufficient to meet various expenditure categories especially basic needs.
- Education, medical and food expenses had higher percentages of households reporting sufficient income.
- Expenditures on food, education, medical and total expenditure show moderate positive correlations with HDI, but the correlation between medical and HDI is negative and significant.
- Other expenditure categories including clothes, entertainment, fuel, functions and luxuries with HDI are insignificant.
- Medical, food, clothes, entertainment, luxuries, fuel and functions expenditure show significant positive correlations with total income.
- Education expenditure shows a weak negative correlation with total income.

These findings provide perceptions into the spending behaviours, income sufficiency, correlations between expenditure patterns and their relationship with HDI and total income among households in Malappuram district. According to 2011 census, Malappuram district has socially and economically backward, asper the study food emerges significant priority of households in Malappuram district with mean expenditure Rs 4135.68 followed by education, medical and cloth.

Variations in Expenditure Pattern

- Gender Wise Expenditure Pattern: Medical Expenditure: Males spend significantly more on medical expenses (mean: Rs. 2929.76) compared to females (mean: Rs. 2245.24). Food Expenditure: Males allocate a larger

portion of their expenditure to food (mean: Rs. 4277.71) compared to females (mean: Rs. 3009.30).

- Clothes Expenditure: Males spend more on clothing (mean: Rs. 3876.40) compared to females (mean: Rs. 2093.02).

- Entertainment Expenditure: There is a trend where males spend more on entertainment (mean: Rs. 2460.98) compared to females (mean: Rs. 1384.38), although not statistically significant.

- Luxuries Expenditure: There is no significant difference in expenditure on luxuries between genders.

- Fuel Expenditure: Males tend to spend slightly more on fuel (mean: Rs. 2987.65) compared to females (mean: Rs. 1818.89), although not statistically significant. In the case of functions expenditure, females spend significantly less on functions (mean, Rs. 1912.90) compared to males (mean, Rs. 3207.83).

- Education Expenditure: Females tend to spend slightly more on education (mean, Rs. 5000.00) compared to males (mean, Rs. 3762.94), although not statistically significant.

- Miscellaneous Expenditure (Other Expenditure): Females spend significantly less on other miscellaneous items (mean: Rs. 1883.33) compared to males (mean: Rs. 3105.49).

- Expenditure Pattern with respect to Type of Ration Card: No significant difference in expenditure between Above Poverty Line (APL) and Below Poverty Line (BPL) cardholders.

- In food expenditure, clothes expenditure and entertainment expenditure there are no significant difference in expenditure between APL and BPL cardholders.

- Expenditures on luxuries, fuel, function, education, other and total expenditure there are no significant difference in expenditure between APL and BPL cardholders.
- Expenditure Pattern with respect to Nature of Family: Joint families spend significantly more on medical expenses compared to nuclear families.
- In food, cloth and entertainment expenditures there no significant difference in expenditure between joint families and nuclear families.
- Expenditure on luxuries, fuel, function, education, other and total expenditure, there is no significant difference in expenditure between joint families and nuclear families.
- Joint families have significantly lower total expenditure compared to nuclear families.
- Expenditure Pattern with respect to Place of Residence: No significant difference in expenditure between rural, semi-urban, and urban areas.
- Food Expenditure: Rural areas have significantly higher expenditure on food compared to semi-urban and urban areas.
- There is no significant difference in expenditure between rural, semi-urban, and urban areas on cloths, fuel, function, education and other expenditures
- Entertainment Expenditure: Urban areas have significantly higher expenditure on entertainment compared to rural areas.
- Luxury Expenditure: Urban areas have significantly higher expenditure on luxuries compared to rural areas.
- Total Expenditure: Rural and urban areas have significantly higher total expenditure compared to semi-urban areas.
- Correlation between Age and Expenditure Pattern: There is a significant positive correlation between age and medical, food, clothes, functions,

education, others and total expenditure categories, indicating that as age increases, expenditure in these categories tends to increase. Entertainment, luxuries, and fuel expenditure have no significant correlation between age and these expenditure categories.

- Regression Result of Factors Influencing Total Expenditure: There is a significant positive relationship between total income and total expenditure. As total income increases, total expenditure also tends to increase.

- Age of the Respondent: There is a significant positive relationship between the age of the respondent and total expenditure. As the respondent's age increases, total expenditure also tends to increase

- Gender: Gender does not have a significant influence on total expenditure.

- Number of Family Members: There is a significant positive relationship between the number of family members and total expenditure. As the number of family members increases, total expenditure also tends to increase.

- Place of Residence: Place of residence does not have a significant influence on total expenditure.

The analysis highlights various factors that influence expenditure patterns, including gender, type of ration card, nature of the family, place of residence and age. These factors provide details into how different groups allocate their expenditure across various categories and can be valuable for understanding spending behaviour.

Objective 3: To find out the influence of the expenditure pattern of households on quality of human development in Malappuram district

Household Expenditure Patterns and Health Outcomes

- Correlation between expenditure on health and health status: Table 6.1 shows a moderate positive correlation between expenditure on health and general health status (correlation coefficient of 0.533) as well as mental

health status (correlation coefficient of 0.472). The correlation is statistically significant at the 0.01 level, indicating a positive relationship between higher expenditure on health and better health outcomes.

- Access to healthcare and expenditure: Table 6.2 examines the relationship between access to healthcare and expenditure on health. It reveals that proximity to public health facilities and the preferred medical facility may not significantly affect expenditure. However, the time it takes to reach the nearest hospital has a significant impact on expenditure, with statistically significant differences observed across different time categories.

Household Expenditure Patterns and Happiness

- Medical expenses: Higher expenditure on medical expenses is negatively correlated with psychological well-being. This suggests that the financial burden and stress associated with medical costs can have a detrimental effect on one's mental and emotional well-being.

- Expenditure on food and clothing: Increased spending on food and clothing is also associated with lower levels of psychological well-being. This indicates that prioritizing basic needs over personal satisfaction and happiness may have an impact on overall well-being.

- Entertainment, luxuries, fuel, and education: There are no significant correlations between expenditure on entertainment, luxuries, fuel, education and psychological well-being. This suggests that spending on these categories may not strongly influence one's overall mental and emotional state.

- Expenditure on functions: Higher spending on functions such as social events and celebrations are negatively correlated with psychological well-being. This indicates that increased expenditure in this category may lead to lower levels of well-being, possibly due to financial strain or societal pressures associated with such events.

- Expenditure on miscellaneous items: Higher spending on miscellaneous items shows a negative correlation with psychological well-being. This suggests that increased expenditure in this category is associated with lower levels of well-being, possibly due to financial strain or other factors related to discretionary spending.

- Total expenditure: The total expenditure does not have a strong correlation with psychological well-being, indicating that the overall amount spent by households may not be the primary determinant of well-being. Other factors and expenditure patterns may play a more significant role.

These findings highlight the complex relationship between household expenditure patterns and psychological well-being. Financial stress, the prioritization of basic needs, social comparisons and personal values all contribute to the observed correlations. It is important to note that correlation does not imply causation, and individual differences and contextual factors should be considered when interpreting these findings.

Household Expenditure Patterns and Freedom

- Medical expenses: There is a positive correlation between expenditure on medical expenses and freedom. Individuals who spend more on medical needs tend to perceive a higher level of freedom in their lives. This could be due to the positive impact of investing in healthcare on physical and mental well-being, which enable individuals to exercise their freedom more actively.

- Food, clothes, luxuries, fuel, functions, education and others: There are no significant correlations between expenditure on these categories and freedom. The level of spending on these items does not appear to have a direct impact on individuals' perceived freedom.

- Entertainment: The correlation between entertainment expenditure and freedom is marginally significant. This suggests a potential association between spending on entertainment activities and individuals' sense of

freedom. Engaging in leisure activities and entertainment may contribute to a greater sense of personal freedom through relaxation, self-expression, and exploration.

- Total expenditure: There is a negative correlation between total household expenditure and freedom. Higher overall expenditure levels are associated with a lower perception of freedom. This could be due to financial constraints and the trade-offs individuals have to make when allocating their resources. Higher expenditure levels may limit the flexibility and choices individuals can make, thereby impacting their perceived freedom.

Household Expenditure Patterns and Education

Variation in expenditure: There are variations in expenditure on education across different educational qualification levels. Individuals with higher educational qualifications tend to have different expenditure patterns compared to those with lower qualifications.

Illiterate head of households spend an average of Rs. 3472.22 on education. Those with education up to SSLC spend more, with a mean of Rs. 4714.29. Among SSLC, plus two and higher education completers, the mean expenditures are Rs. 4319.61, Rs. 3492.11, and Rs. 3096.30, respectively. ANOVA results ($F = 2.799$, $p = 0.028$) show a significant difference in education expenditures, indicating the impact of educational qualification levels on household spending. ANOVA results indicates a statistically significant difference in expenditure on education across the educational qualification categories ($F = 2.799$, $p = 0.028$). This suggests that household expenditure has an influence on education qualification levels.

- The observed variations in expenditure on education can be attributed to several factors. Individuals with higher educational qualifications may have a greater awareness of the importance of education and its long-term benefits. They prioritize allocating more financial resources towards educational expenses, recognizing education as an investment in their own knowledge and skills or in supporting the education of their children. They also have a

better understanding of the potential economic returns associated with education.

- On the other hand, individuals with lower educational qualifications, such as those who are illiterate or have completed only basic education levels, face economic constraints

- Socio-cultural factors and societal norms are also influenced expenditure patterns on education. Factors such as the importance given to education within a community, the availability of educational facilities, and awareness about educational opportunities can shape household expenditure decisions.

- Higher expenditure on education by individuals with higher educational qualifications suggests a stronger commitment to investing in education. This investment can lead to better educational outcomes, improved employment opportunities, and enhanced socio-economic mobility. Conversely, lower expenditure on education by individuals with lower educational qualifications may limit their access to quality education and hinder their opportunities for personal and socio-economic development.

Household Expenditure Patterns and Human Development

Regression result of various expenditures influencing on human development (HDI)examines how different household expenses affect the level of human development. The R-squared value of 0.120, which indicates that about 12% of the variance in the quality of human development can be explained by the included factors, indicates that the model's overall fit is modest. Two important predictors stand out among the evaluated expenses:

- Expenditure for Medical: Expenditure for medical increases by one-unit, human development decreases by 0.176 units, assuming all other variables are constant. The statement describes a situation in which households increase their expenditures on medical care but the community's general level of human development does not considerably improve. These points

underlying difficulties or shortcomings in the healthcare system as well as other social, economic, or environmental variables that affect the population's general well-being.

- Expenditure on Food: A rise in food spending is associated with higher-quality human development. This outcome emphasizes how is important the proper nutrition for promoting human development. Higher food expenditures imply improved access to nutrient-dense meals, favourably affecting health and overall development results.

- Expenditure on Education: For every one unit increases in educational expenditure, HDI is expected to increase by 0.099 points when the expenditure on other item constant.

- Other expenditure categories, including clothing, entertainment, fuel, functions and education did not show significant effects on human development quality in this analysis. It is important to note that while these specific categories did not yield significant results, their impact might vary based on the context of the study and the population under consideration.

Objective 4: To explore the impact of income disparities on the quality of human development in Malappuram District.

- Gini coefficient interpretation: The Gini coefficient measures income inequality, ranging from 0 to 1. A coefficient of 0 represents perfect income equality, while a coefficient of 1 represents maximum income inequality. The Gini coefficient reported in table 6.8 is 0.60, indicating a moderate level of income inequality within the surveyed population. This suggests a significant difference in income distribution among individuals, with a notable gap between the highest and lowest income earners. In summary, the findings highlight the importance of equitable income distribution for promoting high-quality human development. Addressing income disparities and fostering inclusive economic growth are crucial steps toward creating a more sustainable and inclusive society.

- The table 6.9 show the correlation between income inequality and HDI, based on a sample size of 386. The correlation coefficient, measured using Pearson's correlation method, quantifies the strength and direction of the relationship between these variables. In this case, the correlation coefficient between inequality in income and HDI is -0.439, indicating a moderate negative correlation.

- A negative correlation between income and human development means that as income increases, the human development tends to decrease, and vice versa. The magnitude of -0.439 suggests that there is a significant inverse relationship between HDI and Income. This finding is statistically significant, as indicated by the p-value of 0.000, which is less than the conventional significance level of 0.05.

- The results emphasize that higher levels of HDI are associated with lower income inequality and vice versa, in the studied population. This could imply that regions or countries with higher human development tend to have more equitable income distributions, or it could be indicative of various socioeconomic factors at play.

- Access to education: The table 6.5 shows variations in expenditure on education across different educational qualification levels. Individuals with higher educational qualifications tend to allocate different amounts of financial resources towards education compared to those with lower qualifications. This suggests that individuals with higher educational qualifications have better access to educational resources and opportunities, contributing to their human development.

- Study finds that accessibility to healthcare services, appropriate expenditure on health, and consideration of psychological well-being are important factors in human development. Ensuring convenient access to healthcare facilities, reducing financial barriers, and promoting the well-being of individuals contribute to improved health outcomes and overall human

development. Investing in healthcare and addressing the financial burden associated with medical expenses are critical steps towards creating an environment that fosters human development and well-being.

- Findings emphasize the significance of quality education in human development. Individuals with higher educational qualifications tend to allocate more financial resources towards education, recognizing the value and long-term benefits of education. Promoting equitable income distribution is crucial in ensuring equal access to quality education for all individuals, as income disparities can create barriers to educational opportunities. Investing in education, improving educational quality, and reducing educational disparities contribute to human development by empowering individuals, enhancing their skills and knowledge and fostering socio-economic advancement.

- Findings highlight the importance of expenditure patterns in various domains, including health, education, and mental well-being, for human development. Financial investments in healthcare, nutritious food and education positively influence individuals' health, well-being and socio-economic opportunities contributing to their overall development. It is crucial to allocate financial resources effectively and prioritize areas that have a direct impact on human development outcomes to foster sustainable and inclusive development.

7.2 Recommendations and Suggestions

Based on the findings related to education qualification, occupation and income, community, and expenditure patterns in relation to human development, the study suggested following.

1. Enhance access to quality education: Since among the three indices considered for the construction of HDI, the education index has more significant impact on human development index, it is crucial to prioritize policies and initiatives that improve access to quality education for all

individuals. This can include efforts to reduce educational disparities, increase enrolment rates, improve infrastructure and resources in schools, and provide equal educational opportunities for all.

2. Promote equitable income distribution: Equitable income distribution plays a vital role in improving human development. To promote a more inclusive development of the society, policies should focus on reducing income inequality and ensuring a fair distribution of wealth. This can involve implementing progressive taxation systems, providing social safety nets, and fostering economic opportunities for disadvantaged groups.

3. Foster inclusive economic growth: Economic development should be inclusive, benefiting all segments of the society. Policies should be designed to create employment opportunities, support entrepreneurship, and promote industries that have a positive impact on human development. Additionally, efforts should be made to address barriers to economic participation faced by marginalized groups and ensure they have equal access to resources and opportunities.

4. Strengthen community support and social cohesion: Communities play a crucial role in shaping human development outcomes. Building strong community networks, promoting social cohesion, and fostering supportive environments can contribute to improved well-being and overall quality of life. This can be achieved through community engagement programs, social initiatives, and policies that address social disparities and promote social inclusion.

5. Promote responsible expenditure patterns: The findings related to expenditure patterns suggest the need for individuals and households to make informed decisions about their spending. Promoting financial literacy and providing resources for budgeting and financial planning can help individuals allocate their resources effectively, ensuring essential needs are met while also prioritizing investments in education, healthcare, and other areas that contribute to human development.

6. Since the health index is mainly depends on mental health (psychological well-being) of people, the policies and programmes should be provided to improve the psychological well-being of the people

7. Address specific challenges identified in the findings: The findings may reveal specific challenges or areas requiring attention. For example, since the findings indicate disparities in education quality based on education qualification, efforts should be directed towards bridging the gap and improving educational opportunities for individuals with lower qualifications. Similarly, since the findings highlight income disparities and their impact on human development, policies should be focus on reducing income inequality and providing support to disadvantaged individuals.

7.3 Scope for Future Research

Based on the findings and suggestions provided, there are several areas for future research that can further contribute to our understanding of socio-economic factors and their impact on human development. Some potential areas for future research include:

- Longitudinal studies: Conducting longitudinal studies can provide valuable insights into the long-term effects of socio-economic factors on human development. By following individuals or communities over an extended period, researchers can assess the impact of socio-economic changes on various dimensions of well-being and identify key factors that promote or hinder human development.

- Comparative studies: Comparative studies across different regions or countries can help to identify variations in the relationship between socio-economic factors and human development. Comparing diverse socio-economic contexts can shed light on the effectiveness of different policies and interventions in promoting human development and provide valuable lessons for policymakers.

- In-depth qualitative research: Qualitative research methods such as interviews, focus groups and case studies can provide a deeper understanding of the experiences and perspectives of individuals and communities regarding socio-economic factors and human development. Qualitative research can uncover contextual factors, social dynamics and individual narratives that may not be captured by quantitative data alone.

- Intersectionality and multidimensional approaches: Future research can adopt an intersectional and multidimensional approach to examine how different socio-economic factors interact and intersect to shape human development outcomes. Exploring the combined effects of variables such as education, income, occupation, gender, ethnicity and geographic location can provide a more comprehensive understanding of the complexities involved.

- Policy evaluation and impact assessment: Evaluating the effectiveness of existing policies and interventions in promoting human development can help to identify best practices and areas for improvement. Assessing the impact of specific policies on different dimensions of well-being, such as education, healthcare, and income distribution can inform evidence-based policy-making and contribute to more targeted and impactful interventions.

- Innovative data collection and analysis: Exploring new data sources such as big data, remote sensing and geospatial data can provide novel insights into the relationship between socio-economic factors and human development. Leveraging advanced analytical techniques, such as machine learning and data mining can uncover hidden patterns and relationships within complex datasets.

- Focus on marginalized populations: Future research should be focused on understanding the specific challenges faced by marginalized populations, such as low-income individuals, ethnic minorities, women and people with disabilities. Investigating the socio-economic barriers and inequalities they

encounter can inform targeted interventions to promote their inclusion and enhance their human development outcomes.

- Policy and program implementation research: Conducting research on the implementation of policies and programs aimed at improving human development can help to identify barriers, facilitators and best practices. Assessing the fidelity, reach and impact of interventions can provide valuable insights into their effectiveness and guide future policy and program design.

7.4 Conclusion

The findings presented in this chapter explain on the relationship between socio-economic factors and human development. Through the analysis of various dimensions of human development, including education, healthcare, income distribution, and expenditure patterns, valuable information have been obtained regarding the factors that influence the quality of life and well-being of individuals and communities in Malappuram district.

In determining the accessibility and quality of education, it was found that educational qualifications play a significant role. Higher educational qualifications were associated with increased expenditure on education and better access to educational resources. To promote human development, it is necessary that to invest in education, health along with reduce disparity between these two. Additionally, the findings emphasized the need for policies and interventions that promote equal access to education, particularly among marginalized populations. To improve better health care system, it is needed proximity to health care fecilities and availability of preferred medical services. Individuals living near public health facilities tended to have lower healthcare expenditure, highlighting the importance of accessibility in reducing financial burdens. Furthermore, the correlation between healthcare expenditure and health outcomes emphasized the positive association between investing in healthcare and improved well-being. The examination of income distribution and its impact on human development revealed that equitable income distribution is crucial for promoting high-quality human development because it reduces the disparity among the people in the form of income which may lead to

improving overall health and educational fecilities. The findings indicated that extreme income inequality negatively affects social mobility, access to education and healthcare and overall well-being. It underscored the importance of addressing income disparities and implementing policies that promote a more equitable distribution of resources to achieve sustainable and inclusive development. The analysis of expenditure patterns indicated that the allocation of financial resources across different categories can have implications for human development. While increased expenditure on necessities, such as healthcare and basic needs were positively associated with better outcomes, excessive spending on certain categories, such as functions and luxuries, showed limited influence on well-being. These findings highlight the need for individuals and households to make informed expenditure decisions that align with their priorities and contribute to long-term well-being.

The findings supported the general hypothesis that socio-economic factors significantly influence the quality of life. Specifically, the specific hypotheses related to education qualification, occupation and community were supported, indicating that these factors play a significant role in shaping human development outcomes, besides the second general hypothesis supports that both income and occupation have significant influence on expenditure pattern of households in Malappuram district.

In conclusion, the findings from this chapter provide valuable insights into the close connection between socio-economic factors and human development in Malappuram District. They highlight the importance of promoting equal access to education and healthcare, addressing income disparities, and making informed expenditure choices to enhance overall well-being. The implications of these findings suggest for evidence-based policies and interventions that prioritize inclusive and sustainable development. It ensures that all individuals and communities have equal opportunities to thrive and improve their quality of life. By understanding and addressing the socio-economic determinants of human development, we can work towards building a more equitable and prosperous society for all.

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APPENDIX

EXPENDITURE PATTERN OF HOUSEHOLDS AND QUALITY OF HUMAN DEVELOPMENT IN MALAPPURAM DISTRICT

A. GENERAL INFORMATION

S.NO		
1	Schedule no:	
2	District	
3	Name of the respondent:	
4	Age	
5	Marital status:	Married = 1 Single =2 Widows=3 Separated=4 Others= 5
6	Mother tongue	Malayalam=1 Tamil = 2 Hindi=3 Others = 4
7	Native place	
8	Religion:	Hindu = 1 Muslim = 2 Christian = 3 Others = 4
9	Caste	
10	Nature of the family:	Joint = 1 Nuclear = 2 Single = 3
11	Number of family members:	
12	Number of children:	
13	Ratio card type:	APL = 1 BPL = 2
14	Residence	Rural = 1 Urban =2 Semi urban =3
15	Qualification	Illiterate = 1 Up to SSLC = 2 SSLC = 3 Plus two = 4 Higher Education = 5
15.1	If higher education	Degree general = 1 Degree professional = 2

		PG General = 3 MPhil = 4 PhD = 5 Other= 6
16	Occupation	Student = 1 Business =2 Self-employment = 3 Private firm = 4 Professional = 5 Govt employment = 6 Casual labour = 7 Domestic servant = 8 No job = 9
16.1	Aspired Occupation	Business = 1 Self-employment = 2 Private firms = 3 Professional = 4 Government employment = 4 Other = 5

B. PARTICULARS OF THE HOUSEHOLD MEMBERS

S.No	**Name**	**Relation with head of households**	**Age**	**Gender Male = 1 Female =2**	**Marital Status married = 1 single = 2 widows = 3 separated= 4 others= 5**	**Educational qualification**	**Occupation**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

C. HOUSEHOLD ASSETS AND POSSESSION

S.No		
1	Ownership of land How many cent_____	Yes = 1 No = 1
2	Possession of house	Owned = 1 Rented = 2 Other = 3
3	Bathroom	Attached = 1 Common = 2
4	Kitchen	Inside = 1 Separate = 2
5	Source of drinking water	Piped = 1 Own well = 2 Common well = 3 Others=4
6	Quality of drinking water	Excellent = 1 Good = 2 Average = 3 Poor = 4
7	Treatment of drinking water	Natural = 1 Boiled = 2 Purified = 3
8	Disposal of waste	Municipal canal = 1 Kitchen Garden = 2 Flow to open space = 3
9	Source of Cooking Firewood:	Gas = 1 Kerosene = 2 Electricity = 3 Biogas = 4
10	Nature of house	Thatched = 1 Tiled = 2 Both thatched and tiled = 3 Concrete = 4 Both tiled and concrete = 5
11	Floor of house	Mud = 1 Wood = 2 Cement = 3 Tiles/Marbles/Granites = 4 Other = 5
12	Electricity	Yes = 1 No = 2
13.	Mobiles	Yes = 1 No = 2

14	TV	Yes = 1 No = 2
15	Fridge	Yes = 1 No = 2
16	Washing machine	Yes = 1 No = 2
17	Vehicle	Yes = 1 No = 2
18	A/C	Yes = 1 No = 2
19	Computer	Yes = 1 No = 2
20	Grinder	Yes = 1 No = 2

D. INCOME PATTERN OF HOUSEHOLDS (MONTHLY) AND D. EXPENDITURE PATTERN OF HOUSEHOLDS

Sources	**Income (Rs) (Monthly)**	**Expenditure pattern of households**	**Expenditure (Rs) (Monthly)**
Agriculture		Education of children	
Business		Medical	
Poultry		Food	
Honey bees		Clothes	
Hiring		Entertainment	
Leasing		Luxuries	
Wage		Fuel and lights	
Salary		Functions	
Pension		Others	
Saving		Total	
Interest			
Foreign remittance			
Property income			
Any others			
Total income			

E SUFFICIENCY EXPENDITURE

1. Whether expenditure is sufficient

Item	Sufficient	Not sufficient	Minimum
Education of children			
Medical			
Food			
Clothes			
entertainment			
Luxuries			
Fuel and lights			
functions			
Others			

2. Do you have saving?

	Yes = 1 If yes, where did you deposit	No = 2
1	Bank	
2	LIC	
3	Society	
4	Blade company	
5	Business	
6	Friends	
7	Money lenders	
8	Post office	
9	Others	

3. Main purpose of saving

Social security	Education for children	Medical	Marriage	Festivals	Construction own house	Starting small enterprises

4. Investment made

Buying cattle	Agricultural land	Gold/jewels	Building house	Starting business	Others

5. Did you take loan? Yes = 1 No = 2

6.1 If yes then amount: _____

7. Source of borrowing

Friends and relatives = 1	Banks = 2	Chit funds = 3	Private money lenders = 4	SHGs = 5

F. EDUCATION QUALITY OF HOUSEHOLDS HEADS

S.NO		
1	Name	
2	Scholarship	If yes Monthly Yearly
3.	Extra curriculum activities Yes = 1 No = 2	If yes, Number of items participated: Percentage of mark
4.	Competitive exam status Qualified = 1 Not qualified = 2	If qualified, Number of attempts
5	My job is exactly matched with my educational qualification	Strongly agree = 5 Agree = 4

		Neutral = 3 Disagree = 2 Strongly disagree = 1
6.	Achievements during Education	Academic achievements = 4 Sports = 3 Arts = 2 Others = 1
7.	Achievements after education	Academic achievements = 4 Sports = 3 Arts = 2 Others = 1

G. HEALTH STATUS OF HOUSEHOLDS

Sl. No.		**Codes**
1.	In general, how do you rate health status?	Excellent = 5 Very Good = 4 Good = 3 Average = 2 Poor = 1
	How do you feel about mental health?	Excellent = 5 Very Good = 4 Good = 3 Average = 2 Poor = 1
	Do you engage in physical activity	Yes=1 No=2 If yes then Daily = 4 Weekly = 3 Monthly = 2 Never = 1
	Over the past two weeks how often have you felt?	Nervous = 1 anxious or on edge =2 nearly every day = 3 frequently = 4 more days than not = 5 Several days = 6

		not at all = 7
	Over the past two weeks how often have you felt depressed or hopeless?	nearly every day = 1 frequently = 2 more days than not = 3 several days = 4 not at all = 5
	Over the past two weeks, how often have you felt little interest or pleasure in doing things?	nearly every day = 1 frequently = 2 more days than not = 3 several days = 4 not at all = 5
	Community safety	Slums = 1 Village = 2 Town = 3
	Food	Fast food = 1 Homely cooked food = 2 If =1, then A. Daily B. Weekly C. Monthly
	Vaccination status	Yes =1 No=2 If =1 then, A. Fully vaccinated B. Partially vaccinated C. Not vaccinated
	Timely food consumption	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C.Never
	Use of intoxicants	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C. Never
	Smoking habits	Yes = 12

		No = 1 If yes then A. Regularly B. Sometimes = 2 C. Never
	Type of food item consumed	1. Food grains Organic = 1 Non organic = 2 2. Fruits and vegetables Organic = 1 Non organic = 2
	Do you have many job opportunities while you are studying?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
	Recreation and leisure in a week (in hours)	2 hours = 1 4 hours = 2 6 hours = 3 8 hours = 4 10 hours = 5 More than 10 hours = 6
	Is religious belief affecting mental health?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5

17. Does any member in your family suffer from the following diseases?

S.NO	Name	Disease	Category		
1.		Blood Pressure	Normal	More than normal	Not yet tested
		Diabetes	Normal	More than normal	Not yet tested
		Cholesterol	Normal	More than Normal	Not yet tested
		Asthma	Chronic	Acute	Never
		Heart disease	Yes	No	Not yet tested

		Cancer	Yes	No	Not yet tested
		Thyroid	Normal	High	Not yet tested
		Kidney diseases	Yes	No	Not yet tested
		Arthritis	Yes	No	Not yet tested
		Fatty liver	Yes	No	Not yet tested

Any other, Specify:

18.	Does any member have Mental disorder?	Yes = 1 No = 2
19	Does any member have a physical disability?	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C. Very rarely D. Never
20	Does any member have a habit of drinking soft drinks?	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C. Very rarely D. Never
21	Does any member have a habit of drinking tea/coffee?	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C. Very rarely D. Never
22	Average litre of water a member in your household drinks?	A. less than 2 litre B. 2 litre C. more than 2 litre

23	Does any member have a habit of reading?	Yes = 1 No = 2 If yes then A. Regularly B. Sometimes C. Very rarely
24	Does your family member perform a routine medical check-up?	Yes = 1 No = 2 If yes then A. Daily B. Weekly C. monthly D. Never
25	How often the house cleaned.	A. Daily B. weekly C. monthly D. Never
26	Do you have any public health facility near to your village?	Yes = 1 No = 2
27	Are you able to take the benefits of health facilities?	Yes = 1 No = 2 If no, then why A. Connectivity is an issue B. Availability of doctor is an issue C. Facility remains closed most of the time D. Facility has no benefits to provide E. All of the above
28	What type of medical facilities/ services your household prefers?	Government health services = 1 Private health services = 2 Chemist shop = 3 Both government and private health services = 4
29	How much time it takes to reach the nearest hospital/Doctor from your household in case of a medical emergency?	B/w 15 to 30 min=1 B/w 30 to 60 min=2 B/w 1 hour to 2 hour=3 More than 2 hour=4.

30	How satisfied are you with the health facilities provided by the district hospital?	Satisfied = 1 Not satisfied = 2 Can't say = 3 if your response is 2 , State the reason……

S.NO	**H. QUALITY OF STANDARD OF LIVING OR LIFE**	
1	How do you rate your job satisfaction?	Highly Satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Highly dissatisfied = 5
2	Are your parents were happy with your occupation?	Highly Satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Highly dissatisfied = 5
3	How many times have you attempted to change your profession?	Highly Satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Highly dissatisfied = 5
4	Do you get adequate earning from my occupation for meeting all the basic needs of family?	Highly Satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Highly dissatisfied = 5
5.	Did you have a lot of job opportunities while you started my carries?	Highly Satisfied = 1 Satisfied = 2 Neutral = 3 Dissatisfied = 4 Highly dissatisfied = 5
S.NO	**I.PSYCHOLOGICAL WELL-BEING SCALE**	
1	Do you lead a purpose and meaning full life?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5

2	Do you think your social relationships are supportive and rewarding?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
3	Are you engaged and interested in daily activities?	Strongly agree = 1 Agree = 2 Neutral=3 Disagree = 4 Strongly disagree = 5
4	Do you actively contribute to the happiness and well-being of others	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
5	Do you think you are competent and capable in the activities that are important to you?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
6	Do you think you are a good person and leading a good life?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
7	Are you optimistic about your future?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
8	Do you get respect from others?	Strongly agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
S.NO	**J. INSTITUTIONAL TRUST**	
1	Do you have confidence in the government?	Yes = 1 No = 2
2	Do you have confidence in the judicial system and courts?	Yes = 1 No = 2

3	Do you have confidence in the honesty of the election?	Yes = 1 No = 2
4	Do you have confidence in the local police force?	Yes = 1 No = 2
S.NO	K. SOCIAL SUPPORT	
	If you are in trouble, do you have relatives or friends you can count on to help you when you need them or not?	Yes = 1 No = 2
	Do you get support from the public regarding social and economic problems?	Yes = 1 No = 2
	Do you believe that you will get any support from the government?	Yes = 1 No = 2
	Are you satisfied or dissatisfied with your freedom to choose what you do with your life?	Yes = 1 No = 2 If yes, Satisfied = 1 Dissatisfied = 2
	Do you have freedom to wear cloth you like?	Yes = 1 No = 2
	Do you have freedom to spend money as you like?	Yes = 1 No = 2
	Do you have freedom to study the courses as you like?	Yes = 1 No = 2
	Do you have freedom to eat food as you like?	Yes = 1 No = 2
	Do you have freedom to travel?	Yes = 1 No = 2
	Do you have freedom to invest to start a business?	Yes = 1 No = 2
	Do you have freedom to choose occupation as you like?	Yes = 1 No = 2
	Do you have freedom to choose life as you like?	Yes = 1 No = 2
	Do you have freedom to make your own decision making?	Yes = 1 No = 2

L.COVERAGE UNDER DIFFERENT EDUCATION AND HEALTH SCHEMES

1. Are you aware about the different educational as well as health schemes launched by the government from time to time?

   Yes =1 No =2

   1.1 If yes, have you got any benefit from these schemes?

   Yes = 1 No = 2

   If answer is yes, what are the schemes you are aware of?

S. No.)	Name of the Scheme (Code)	Types of benefit (Cash/kind)

Rural Housing- Indira Awaas Yojna (IAY) = 1,

Social Security Programmes = 2,

Land Reforms = 3,

National Old Age Pension Scheme (NOAPS) = 4,

National Family Benefit Scheme (NFBS) = 5

Janani Suraksha = 6,

Pre matric scholarship = 7,

Post matric scholarship = 8,

Asha = 9,

ICDS = 10,

MGNREGA = 11,

Mid-day meals = 12

Kasturba balika vidalaya yojna = 13,

Ashtriya Madhyamik Shiksha Abhiyan (RMSA) = 14,

PM Jan Dhan Yojana = 15,

Widow Pension = 16,

Handicapped scholarship = 17,

Senior citizenship = 17,

Unemployment allowances = 18,

BPL benefit = 19,

Navodaya vidalaya = 20,

Ujjwala = 21,

Any other (please specify) = 22

Sl.No.	**M.RETURNS ON EDUCATION AND HEALTH**	
1	Do you think the current health status helps to increase the work efficiency of your family members?	Agree = 1 Agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5
2	Is there any improvement in socio-economic status of your family as compared to earlier times?	A. Enhancement in educational level B. Improvement in health status C. Both A and B D. No improvements