

**ANALYSIS OF LIVELIHOOD ISSUES OF TRIBAL WOMEN:
THE CASE OF PALAKKAD DISTRICT**

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KERALA, INDIA**

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**ANALYSIS OF LIVELIHOOD ISSUES OF TRIBAL WOMEN:
THE CASE OF PALAKKAD DISTRICT**

by

SACHANA, P.C

2013-11-158

THESIS

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**DEPARTMENT OF AGRICULTURAL EXTENSION
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KERALA, INDIA**

2015

DECLARATION

I, hereby declare that this thesis entitled “**ANALYSIS OF LIVELIHOOD ISSUES OF TRIBAL WOMEN: THE CASE OF PALAKKAD DISTRICT**” is a bonafide record of research work done by me during the course of research and the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title, of any other University or Society.

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Certified that this thesis entitled “**ANALYSIS OF LIVELIHOOD ISSUES OF TRIBAL WOMEN: THE CASE OF PALAKKAD DISTRICT**” is a record of research work done independently by **Ms. Sachana, P.C (2013-11-158)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to her.

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INTRODUCTION

1.INTRODUCTION

A socially, ethnically and politically cohesive group of people is known as tribal people. When majority of the communities in the world kept changing their lifestyles, competed with each other and developed materialistic instincts to keep pace with the “progress” of the world, there were communities still living in line with their traditional values, customs and beliefs. The exploitative mindset of the mainstream society made these communities recede often into forests and high-altitude mountains, where they could continue to live in peace with nature and their unpolluted surroundings. The forest occupies a central position in tribal culture and economy. The tribal way of life is very much dictated by the forest right from birth to death. Process of modernization has affected them culturally, and other processes of displacement have made them a marginalized segment of the society. Since independence, various measures have been taken up at the national and state level for protecting the interests of the tribespeople of the country and particular attention has been given to tribal development in the different plan periods. Out of the total tribal population, tribal women add up to almost half. Like all other communities, development status of tribal communities also to a large extent depends on the upliftment of the status of tribal women.

Being the most vulnerable section, tribal women fall prey to various levels of exploitation and discrimination from the rest of the society. The very working of the development paradigm, by uprooting them from their niche, language, modes of understanding, livelihood etc., proves to be against their interests. The pressure for subsistence fall heavily on women. The loss of traditional agricultural land compels them to engage in wage labour. As gender discrimination is prevalent among tribal labour, the women are forced to work for lower wages.

The status of women in a society is a significant reflection of the level of social justice in that society. Women's status is often described in terms of their level of income, employment, education, health and fertility as well as the roles they play within the family, the community and society (Ghosh, 1987). In many socioeconomic characteristics tribal women lag far behind tribal men. The literacy rate (illiteracy rate was 32% for men and 41% for women), education at the school level for boys was higher than for girls, there are more widows (10%) than widowers (2%), about 45% of women were unemployed, whereas only 32% of the men were unemployed (Aerthayil, 2008).

As per 2011 population census, the Scheduled Tribe population of Kerala was 484839 which constituted 1.45 per cent of the total population of the State. The population was highest in Wayanad district (31.24 per cent) followed by Idukki (11.51 per cent), Palakkad (10.10 per cent) and Kasargod (10.08 per cent). These districts together accounts for 62.93 per cent of Scheduled Tribe people in the State and the lowest percentage distribution was found in the coastal district of Alappuzha (1.36 per cent). There has been an increase of 0.63 per cent as compared to 2001 population census. As far as the sex ratio was concerned it was found to be 1035. The Scheduled Tribes in Kerala are geographically delineated and are overwhelmingly rural.

Kerala comprises of 36 unique kinds of Scheduled Tribes (ST) whose livelihoods show wide variation. Their traditional jobs also vary such as hunting-gathering, shifting cultivation, settled agriculture, contract labour, etc. Adivasis are the most under developed part of our society because of the lack of the developmental projects to address their needs and the complex issues related to their lives. It is a fact that some of the vulnerable sections of society that ought to have benefited more from the various reforms have ultimately become victims of the reforms. Income plays a major role in the economic security of the family. It improves the standard of

living and their by initiates development. Owing to the lack of a consistent income and the absence of sources of income, the adivasis are among the most economically backward and vulnerable communities.

Geographically, tribespeople are unique. Attappadi is an extensive mountain valley, located between $10^{\circ}55'10''$ and $11^{\circ}14'19''$ North latitude and between $76^{\circ}27'11''$ and $76^{\circ}48'8''$ East longitude, stretching from Mukkaly to Anakkatty and Thazemully to Muthikkulam covering an area of 745 sq.km in Mannarkad Taluk of Palakkad District, Kerala state, South India. Tribal hamlets of Attappadi are found in all the three panchayats, namely, Agali, Pudur, and Sholayur. *Irula* hamlets dominate in all the three panchayats. Kurumbas reside only in Pudur and Sholayur is an exclusively *Irula* Panchayat. Numerically, *Irulas* form the largest tribal community (82.25 per cent) followed by *Mudugas* (12.53 per cent), and *Kurumbas* (5.22 per cent) (Census 2011).

On the basis of geographical and climatic peculiarities it is possible to differentiate the region into two zones, viz., Western Attappadi that receives above 3000 mm annual rainfall and Eastern Attappadi, which is a rain-shadow region receiving less than 1000 mm of average annual rainfall. Erratic rainfall with poor soil moisture retentivity has rendered these lands an erosional landscape leading to desertification.

Attappadi region is a showcase for the most vibrant and yet conflicting social and cultural ethos. Once it was a place uniquely inhabited by the tribespeople. But now, Attappadi has become the recipient of waves of migration from the plains of East and West, which eventually made the tribes a minority, constituting less than half of the total population.

A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain and improve its capabilities and assets while not undermining

the natural resource base. Livelihood issue analysis can be very useful for showing how an intervention fits with the livelihood strategies such as agricultural intensification/ extensification, livelihood diversification and migration etc. and how people's livelihoods are being enhanced or constrained.

One of the most important assets, which determine the livelihood of inhabitants in an agrarian society is land. Land alienation and gradual and continuous expulsion of tribespeople from their land in the name of development and economic growth is the most crucial survival issue being faced by tribespeople in the country. Attappadi in Kerala is not an exception. Land degradation results in shifts or diversification in livelihood options. The land use pattern in Attappadi has undergone spectacular changes since the first quarter of the past century, degrading the quality of its land to irreversibly unsustainable levels. As a development tool livelihood analysis hence offers intensive method of capturing the story of how villagers survive.

1.1 Need for study

The main aim of livelihood issue analysis is to understand and describe the major issues faced by the tribal women particularly the most vulnerable section of the society. This is particularly true in the case of the tribal people who are the most neglected, dispossessed and subjugated class in rural hierarchy. In spite of the implementation of all the developmental activities, the progress made by the tribespeople is meager. Hence this study, "Analysis of livelihood issues of tribal women: The case of Palakkad district" assumes significance.

1.2 Scope of the study

This study was conducted in Attappadi block only and within that it was restricted to tribal women in the Agali, Pudur and Sholayur panchayat. As per the present study, the sections of the society that depend on traditional resources for

livelihood and the vulnerable sections like Scheduled Castes and Scheduled Tribes in the state were left out from Kerala's development experience. When comparing the status of these outlier communities to the general population one can observe that the factors that were kingpins in the chariot of Kerala's development experience, like high literacy, favourable sex ratio, better demographic indicators, government spending in service sector, remittance income etc. have played only a limited role in the human development of these communities. The scientific and statistical contributions of the study to the body of research in general and agricultural extension in particular will also be substantial. The delineation of various assets influencing the livelihood of tribespeople will be of phenomenal utility to those interested in research in these lines. The results can be used to support the decisions made by researchers and policy makers in their effort to secure sustainable development for tribespeople.

Objectives

The objectives of the study are;

- To identify and prioritize the livelihood issues of tribal women and study their perception of freedom from poverty and insecurity
- The scale of social participation of tribal women
- Profile characteristics of tribal women includes socio economic status

1.3 Limitations of the study

Being a single investigator the researcher faced many limitations. Many different tribal hamlets were found scattered throughout Attappadi. Most of these were not accessible by motorised vehicle and must be reached on foot. Language was another limitation. The tribal language might vary from Malayalam and Tamil, they also used their own colloquial languages. The time factor, which is crucial for any study, was another limitation. Since respondents were illiterate and reluctant to share

whatever quantitative information they knew, data collection was constrained to that extent. Since this study was completely based on perception and expressed opinion of the respondents it might not be free from personal bias. Care was taken to avoid this and make the study as objective as possible.

1.4 Presentation of the study

The report of the study is presented in five chapters. The first chapter deals with introduction, wherein the statement of the problem, need, scope and limitations of the study are discussed. The second chapter covers the review of the studies related to the present study. The third chapter is methodology which encompasses the details on selection of the study area, sampling, data collection procedure, variables selection, empirical measures used, design of the research, statistical tools used etc. In the fourth chapter the results in relation to objectives with interpretation of the findings and discussion are presented. The fifth chapter summarizes the study highlighting the salient findings. The references, appendices and abstract of the thesis are given at the end.

REVIEW OF LITERATURE

2. REVIEW OF LITERATURE

The chapter aims at developing a theoretical framework on the concept of “Livelihood analysis of tribal women: The case of Palakkad district”. This has been furnished on the basis of definitions, ideas and concepts. Each topic presented in the chapter is associated with the available research findings either directly or indirectly. This helps to give a proper orientation of the study and also to place the problem on a theoretical perspective. This also assists in evaluating one’s own research efforts by comparing them with the related effort of others.

The review has been presented under the following heads:

2.1 Concept of tribe

2.2 Livelihood analysis

2.3 Profile characteristics of tribespeople

2.4 Perception of freedom from insecurity

2.5 Perception of freedom from poverty

2.6 Social participation

2.1 Concept of Tribe

“The term tribes commonly signifies a group of people speaking a common language, observing uniform rules of social organisation and working together for common purpose. Broadly, tribe is an aggregated group of people sharing social values, common dialect, territory and culture. But in a restricted sense, tribe means a group of people usually under a chief and maintaining distinct cultural traits” (Dubey, 1977).

Tribe may be defined as “a group of people speaking a common language, observing uniform rules of social organisation and working together for common purposes such as trade, agriculture or welfare. Other typical characteristics include a common name of contiguous territory, a relatively uniform culture or way of life, and a tradition of common descent” according to Verma (1996).

2.2 Livelihood Analysis

Chambers and Conway (1991) reported that livelihood analysis is concerned with stability, crises and coping, relative income, expenditure, credit and debt. In reality, livelihood analyses multiple activities.

According to Ramakrishnan (1993), sustainable development aims at sustainable livelihoods for the weaker and vulnerable sections of the society. He also emphasized the need for efficiency in resources with equity and social justice. This implies strong community participation.

According to Rajendralal (2005), development will affect the future of tribal people and the choice of technology and policies will heavily influence the sustainability of tribal livelihood. Hence he has the view that the available technology options developed by scientists and innovative environmentalists should be carefully analysed and their economic, social and ecological impacts should be described.

Aerthayil (2008) reported that globalization had a negative impact on tribes people in Kerala, the most backward and marginalized sections in the state, on their livelihood, including their employment and availability of essential commodities, and on the socio-cultural life, including their cultural and religious practices.

FAO (2008) reported that livelihood is closely linked to socio-economic status, a term often used to reflect an individual's access to resources such as food,

potable water, health facilities, educational opportunities, and housing. Generally, five categories of assets are identified as contributing to livelihoods.

State Planning Board, Government of Kerala (2011), has identified 17 alarming issues in the tribal community. They are: (i) Extreme levels of poverty, deprivation and vulnerability; (ii) High levels of exclusion, both developmental and social; (iii) Extreme low levels of empowerment (political, social and economic); (iv) Rapid marginalization due to unfair, unequal and exploitative relations of production, and exchange between tribal communities and others; (v) Low level of access to entitlements; (vi) Practically zero participation in development matters with no autonomy in any form of decision making; (vii) Abnormally huge siphoning of developmental resources and benefits meant for tribal people by middlemen; (viii) Poor human development with low levels of literacy and access to health care; (ix) Rapid alienation of assets like land; (x) Alarming depletion of social capital, especially traditional forms of organization and leadership; (xi) Quick deterioration of traditional knowledge systems and cultural attainments; (xii) Fast-increasing tendency to use tribal people as cat's-paws in criminal activities like illicit distillation, cultivation of narcotic plants, stealing of forest wealth, etc.; (xiii) High levels of exploitation of women by outsiders; (xiv) Weak delivery system of public services; (xv) Dependency-inducing developmental programmes relying on distribution of benefits, rather than building up of capabilities; (xvi) Implementation of ad hoc and stereo-typed developmental programmes in the absence of proper planning; (xvii) Very weak monitoring systems.

2.3 Profile Characteristics of Tribespeople

Age

Age played a significant role in the ordinary tribal life according to, Dubey (1977).

Kumaran (2008) observed in his study about the livelihood security of farmers of Palakkad district, the frequency distribution of the profile characteristics of the respondents revealed that 59% of them belonged to old age group.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that the frequency distribution of the profile characteristics of the respondents revealed that 67.78 per cent of them belonged to middle age group and 24.44 per cent were old age group.

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi reported no significant relationship between age and livelihood.

Anoop (2013) observed in his study about *Paniya* tribe of Wayanad that the frequency distribution of the profile characteristics of the respondents revealed that young and middle aged categories were heading the households.

Educational qualification

Sharma *et al.* (2010) in their study observed that among the participating households the proportion having lower primary qualifications was the highest while those having senior secondary qualification were the lowest.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that regarding the educational status, majority, 54.44 per cent of the respondents were illiterate and followed by (20%) middle level school.

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi reported that the educational status, 35 per cent of them had only up to primary level.

Eighty two percent of them were illiterate and rest of them was primary and middle school level according to Anoop (2013).

Family size

The size of family is also one of the indicators of development. Among tribes people smaller sized families are most common according to Nazer (2003).

Rajendralal (2005) reported that while considering certain major communities, the average family size in respect of the *Paniyans* worked out to 4.5, *Mala Arayans* 5.5, *Irulas* 4.42 and *Kurichians* 5.45.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that forty per cent of the respondents had 4 members in their families and most of them lived in nuclear family.

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi reported that 78 per cent of the respondents had medium family size consisting of five to seven members.

Monthly Income

Regarding annual income, nearly two-third (66%) of the respondents earn less than Rs. 30000, in which 32% of them earned Rs. 20000 as household income, which is below the poverty line according to Kumaran (2008).

Vijayanand and Jithendran (2008) reported that MGNREGP has suddenly increased the purchasing power of poor and there is visible local economic

development and also lays foundation of livelihood security through hundred days wage employment.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that regarding the annual income, 54.45 per cent of the respondents earned income ranging between Rs.30001 and Rs.45000 followed by 41.11 per cent in the income range between Rs. 15001 and Rs.30000.

Anoop (2013) in his study about *Paniya* tribe explained that the income, majority of the respondents had an income ranging between Rs.2000-Rs.4000.

Indebtedness

The study by Mathur (1977) revealed that the most important cause of indebtedness among the tribes of Kerala are their primitive agricultural technology, illiteracy, low wages, absence of marketing infrastructure and their social and religious problems. The study revealed that the agricultural loans were mostly used for consumption by majority of tribes. He has also reported that these tribes who have adopted improved seeds and modern techniques of cultivation are heavily indebted than those who have not responded to improved techniques.

According to Mathur (1977), indebtedness is a very serious problem faced by the tribes of Kerala. Tribal indebtedness is both a cause and effect of poverty and is also related to bonded labour and alteration of tribal land.

Prakash (1980) reported a positive and significant relationship between indebtedness and adoption of improved agricultural practices in the medium developed tribal areas of Wayanad while this relationship was not significant in less developed area.

Economic and Social Committee (2000) stated that the practical aim is to define a fundamentally identical framework to identify and typify situations in which households are objectively unable, on a structural and ongoing basis, to pay short-term debts, taken out to meet needs considered to be essential, from their habitual income provided by work, financial investments or other usual sources, without recourse to loans to finance debts contracted previously.

George and Krishnaprasad (2006) noticed that most of the suicide victims in the Wayanad district of Kerala were in debt trap of private money lenders. The mental and social tensions, as well as stress in the family are due to the economic insecurity create an atmosphere of utter helplessness and disarray.

Kaushal (2008) found that there is no direct link between indebtedness and farmers suicides.

Anoop (2013) in his study about *Paniya* tribe found that indebtedness, they had debt amount ranging from Rs. 1000-3000.

Media exposure

Pradeepkumar (1993) found that mass media contact was positively and significantly related with the extent of participation in agricultural and allied fields.

Oommen (2007) had reported that 51 per cent of respondents had medium level of mass media exposure followed by 29 per cent with high level of mass media exposure.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that 97.78 per cent of the respondents had exposure to TV and 58.89 per cent were listening radio for information.

Anoop (2013) in his study about *Paniya* tribe the tribespeople were not much exposed to mass media as most of them were deprived of the same.

Haseenabeevi (2014) in her study about the radio listening behavior, majority (58.34%) of the farmers had medium mass media exposure.

Political orientation

Kareem and Jayaramaiah (1998) observed no significant relationship between political participation and extent of participation in development programme.

Geetha (2002) found that 76% labourers of *thozhilsena* were of the opinion that political interference was one of the main hindering factors for the successful implementation of any new programmes.

Majority (79%) of the respondents had very high level of political orientation thinking that their development would occur only through political interventions according to Kumaran (2008).

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi found that majority of the tribes people (65%) belonged to medium level of political orientation followed by high level (22.5%).

Environmental orientation

According to Prabhu (1993), tribals are forest dwellers. Even today almost 90 per cent of them still live in forest tracts. Their intricate link with the forest as their *anna, aarogya, aasra* (food, wellbeing, and security) had been the basis of their symbiotic relationship, their physical and cultural survival. He also reported that as the modern management systems have failed, it is time to look at the tribal holistic, futuristic, ecologically sustainable and culturally specific modes of management and

development as the new way with responsible stewardship of the renewal resources and capacity to determine their own future and quality of life.

According to Joseph (2004) in the past, there were as little awareness about the importance of flora and fauna and their conservation in natural habitat. Since tribes and forest have two way relation, the development of tribes symbiotically lead to environmental enrichment.

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi reported that the environmental orientation, majority, 52.5 per cent of the respondents had high level followed by 40 per cent of them had medium level of orientation.

Regarding the environmental orientation, Anoop (2013) in his study about *Paniya* tribe 89 per cent of the respondents had high level of orientation.

Alcoholism

Loughhead *et. al* (2001) reported that to ensure all round development of the disadvantaged, reforming social deviants is essential with proper restriction of the production of alcohol and distribution of drugs in India, plus supporting rehabilitation centers with the aid of NGO's and others.

Shincy (2012) in her study on livelihood analysis of *Irula* tribe of Attappadi reported that 77.5 per cent of the respondents were non users of alcohol even though it is a strong social menace among them.

Anoop (2013) in his study about *Paniya* tribe, it was found that 77 per cent of the respondents were daily users of alcohol.

Body Mass Index (BMI)

According to Rao (1996), nutritional anthropometry can be used to understand whether the person is underweight, normal weight, overweight or obese.

According to Srilakshmi (2003), body weight is most widely used to sensitive and simplest reproducible anthropometric measurements. It indicates the body mass and is a composite of all body constituents like water, mineral, fat portion and bone. It reflects more recent nutrition.

According to Gopaldas (2005), the extent of height deficit in relation to age as compared to region standard is regarded as a measure of the duration of malnutrition.

2.4 Perception of Freedom from Insecurity

Most of the studies of (Fernandes *et.al*, 1987) show that environmental deterioration increases distances and the transition from shifting to settled agriculture involves higher workload for women.

According to Haseena (2006), as a result of the destruction of the environment and increasing pressure from the village many men have to migrate to other region, which increases the work load of women. Thus the economic status of the family particularly of women deteriorates due to the migration. Moreover, in the absence of men, women are left to fend for themselves and deal with the exploitative elements such as money lenders, businessmen and landlords. Tribal women with low literacy are especially susceptible to this situation, leading to land alienation, cheating in weighing and pricing and sexual exploitation.

Due to the impact of modernisation and influence of non-tribal societies on tribal societies, women are losing the socioeconomic and cultural positions that they enjoyed earlier (Aerthayil, 2008).

According to Nithya (2014), a large number of tribal women face extreme forms of social exclusion and discrimination in the public sphere of life. It is reported that tribal women in Wayanad are victims of sexual exploitation and physical harassment.

As per the studies conducted in the tribal areas in Himachal Pradesh, Swangla and Puri in 2014 reported that girls either have to walk few kilometers through isolated areas or avail limited transport facilities to reach the schools leading to insecurity on the way to school. This has been attributed as a cause of dropout by 15.34% of the students.

2.5 Perception of Freedom from Poverty

Valentine (1968) says that “the essence of poverty is inequality”.

Mitchel (1978) states that perception is the factor that shapes and produces what we actually express.

Blaikie and Brookfield (1987), have examined the poverty and environmental linkages. They hold the view that poverty, insecurity of tenure, public policies and inaccessibility to other resources have frequently cited as the prime factor for the indiscriminate exploitation of natural resources. Poverty and land degradation are often associated.

Needs may be relative to what is possible and are based on social definition and past experience according to Sen (1999).

According to Haseena (2006), the continued sexual exploitation of tribal women by non-tribals and its traumatic consequences for the victims as well as the indigenous communities to which they belong have become issues of wider concern. It is reported that most of these women are victims of non-tribal men who entice them often with false promises of marriage. Several others while working as maids or casual labourers on plantation and estates are abused by their masters or jobbers.

The Planning Commission of India in its 'Kerala Development Report (2008)' states that: rural poverty among adivasis in Kerala persists and comes to more than two – and - half times that of the rural population of Kerala in general. Adivasis constitute only around one per cent of the state's population, nearly one - fourth of them still live below the official poverty line; the actual incidence of poverty among them could be even higher, this high incidence of poverty among adivasis points to the various dimensions of social inequalities prevalent in the state.

Human Development Report of Tribal Communities in Kerala (2009) reported that however, rural poverty among the STs remains more than two and a half times of that of the total rural population below poverty line in the state, which stands at 9.4 percent.

According to Nithya (2014), study by the Health Department as well as AIIMS, New Delhi, shows the pressing poverty among the tribals in the state, about 2402 families take meal one time in a day and amongst them half are agricultural labourers and 34,092 families only have two meals a day and the number of family members who are having malnutrition is 13,960.

2.6 SOCIAL PARTICIPATION

Sasankan (2001) found that majority of the respondents had medium level of social participation due to lack of credible institutions and extension contacts.

Reddy (2003) revealed that majority of the respondents (60%) had medium level of social participation followed by low (25.33%) and high (14.67%) level of mass media exposure respectively.

Prabhu (2011) in his study on MGNREGP in Palakkad reported that regarding social participation 95 per cent of the respondents participated in gramasabha meeting and 56 per cent of the respondents participated in identification of work.

METHODOLOGY

3. METHODOLOGY

This chapter deals with the description of the methods and procedures adopted in conducting the present research study. The various aspects are furnished in this chapter under the following subheadings.

3.1 Research Design

3.2 Locale of the study

3.3 Selection of sample

3.4 Identification and prioritization of livelihood issues

3.5 Operationalisation and measurement of variables

3.6 Methods used for data collection

3.7 Statistical tools used for the study

3.1 Research Design

A research design is a fundamental plan for gathering the empirical data necessary to corroborate or refute the basic conceptual framework models or theories being investigated (Hoffer and Bygrave, 1992)

Ex-post facto design was employed in the present study. According to Singh (2006), an *ex-post facto* research is one in which the investigators attempt to trace an effect that has already occurred to its probable causes. It is a systematic empirical enquiry in which the scientist does not have direct control over the independent variables.

3.2 Locale of the study

The study was conducted in Palakkad district of Kerala. This district was purposefully selected for conducting the study because this is one of the districts in Kerala having the highest concentration of tribal settlements and the wide

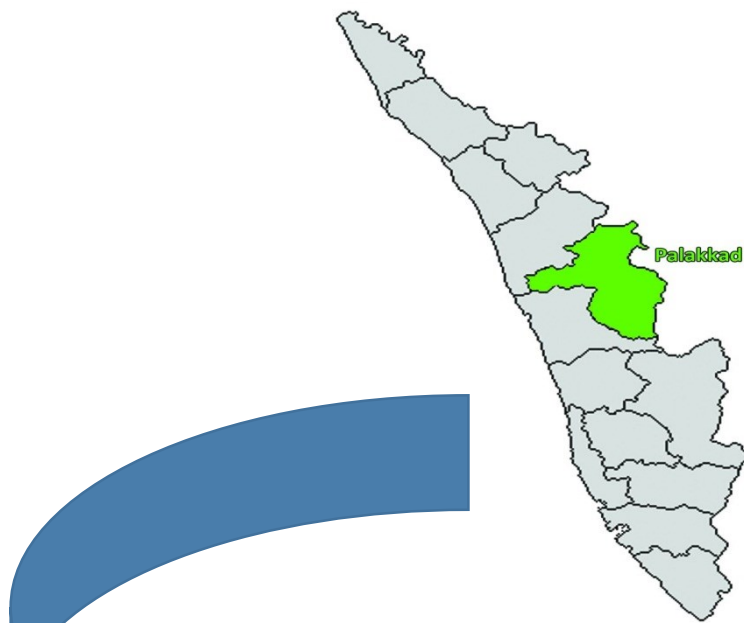


Plate 1. Map of Kerala showing the district of study

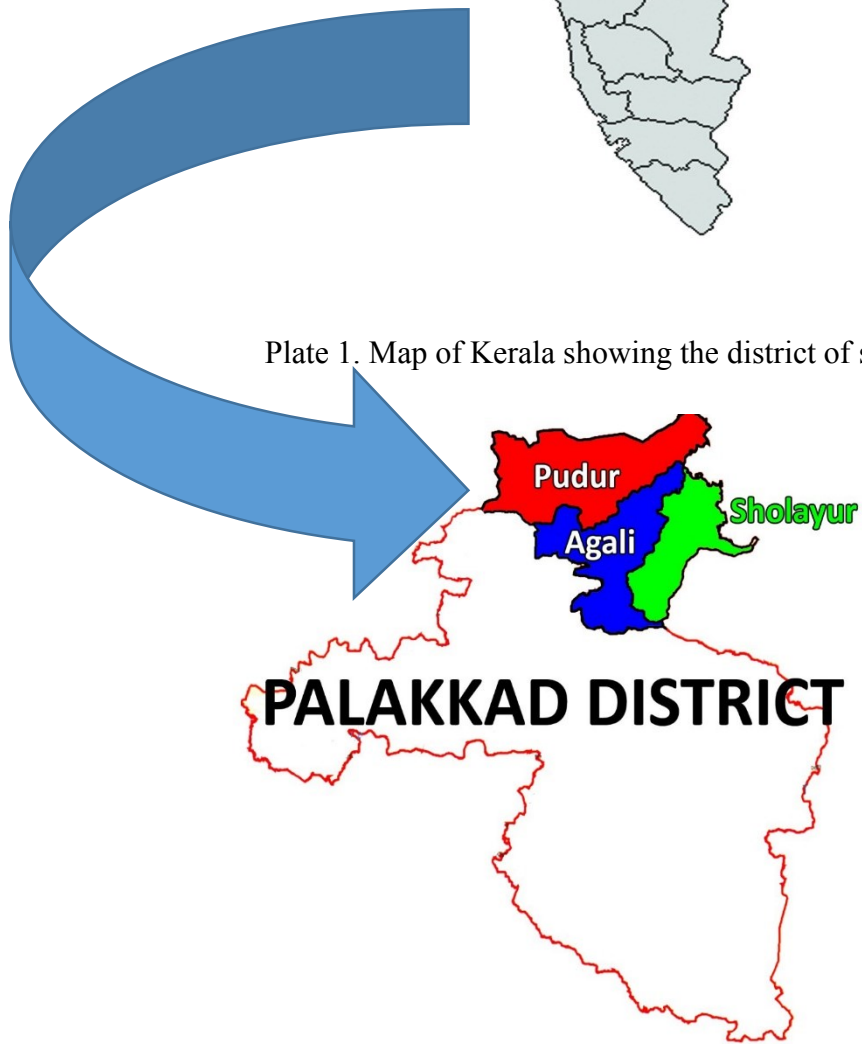


Plate 2. Map of Palakkad showing the panchayats of study

spread ecological degradation which is adversely affecting the livelihood security of people, especially the tribal women population.

Brief description of the district

Palakkad is the largest district in Kerala bordered on north by Malappuram district, on the south by Thrissur district, on the west by Thrissur and Malappuram districts and east by Coimbatore district of Tamilnadu. The district is 13.6 per cent urbanised and the district titled as the ‘granary of Kerala’. Its population is 28,10,892 which constitutes 8.42% of the total state population (Census, 2011). The total area of the district is 4,480 Sq.km which is 11.5 per cent of the state area. Of the total area, about 1,360 Sq.km of the land area is covered by forest. Palakkad district comprises of five taluks, 13 blocks, 4 municipalities, 163 revenue villages, one district panchayat, 13 block panchayats and 91 grama panchayats. The Western ghats borders the region and the 32 km long gap (Palakkad gap) in the mountains assert a dominant influence on the climate of the region. The district lies between 10°21’ and 11°14’ North latitude and 76°02’ and 76°54’ East longitude.

3.2.1 Selection of Panchayats

Attappadi, one of the prominent forest regions of Kerala, is situated in the north eastern part of Palakkad district of Kerala. It is one of the 43 tribal development blocks in India. The Scheduled Tribe population of Kerala is 4,84,839 persons as per 2011 Population Census constituting 1.45 per cent of the total population of the State. Highest concentration of Scheduled Tribes is seen in Wayanad district (31.24 per cent) followed by Idukki (11.51 per cent), Palakkad (10.10 per cent) and Kasaragod (10.08 per cent). These four districts together accounts for 62.93 per cent of Scheduled Tribes in the State. Attappadi is predominantly a tribal block and it lies at the eastern half of the Mannarghat taluk of Palakkad. Administratively the Attappadi development block consists of three

gramapanchayats namely Agali, Pudur and Sholayur and it spreads over six revenue villages such as Agali, Kallamala, Pudur, Padavayal, Sholayur and Kottathara. The population of Attappadi consists of tribal people and non-tribal people (Settlers or *vanthavasis*). The non-tribal population, which largely consists of settlers from the states of Tamil Nadu and Kerala, constitutes 55 per cent of the population, and the Scheduled Tribe and Scheduled Caste comprise 45 per cent. The tribal people of Attappadi reside in small nuclear villages called *Ooru*. Each *Ooru* contains, on an average, 50 houses constructed in rows, close to one another. The *Irulas* form the majority among the tribals and live in 144 hamlets.

3.3 Selection of sample

The study was conducted in three panchayats of Attappadi tribal developmental block namely Attappadi I (Agali panchayat) Attappadi II (Pudur panchayat) and Attappadi III (Sholayur panchayat). One tribal settlement from each of the panchayat identified for the study. From these settlements 40 women respondents were selected randomly for the study. Thus total of 120 was the sample size.

3.4 Identification and prioritization of livelihood issues

Identification of livelihood issues was made using methods like focus group interviews, participant observations and discussions with key informants. Secondary sources of information were also made of the collection and identification of livelihood issues. All the identified livelihood issues were then subjected to judges rating for selecting important and relevant livelihood issues for the purpose of the study. For prioritizing the livelihood issues the selected list of livelihood issues were administered separately to the tribal and non-tribal respondents for indicating the priority and importance of the issues to be addressed by giving ranks. This was done to critically examine the differential perception of tribal women and non-tribal respondents. Which would provide information and insights to the policy makers and administrators about the

appropriate developmental interventions and focus to be made while formulating the developmental strategies for tribal women.

3.5 Operationalisation and measurement of variables

Based on the objectives, review of literature, discussions with experts and observations made by the researchers, the following dependent and independent variables were selected for the study.

Dependent variables

1. Perception of freedom from poverty
2. Perception of freedom from insecurity
3. Social participation

Independent variables

1. Age
2. Educational status
3. Family size
4. Alcoholism
5. Political orientation
6. Environmental orientation
7. Media exposure
8. Monthly income
9. BMI (Body Mass Index)
10. Indebtedness

3.5.1 Operationalisation and Measurement of the Dependent Variables

3.5.1.1 Perception of freedom from poverty

The perception of freedom from poverty was operationally defined as degree to which an individual is aware and interprets meaningfully the level of access and consumption of food and other livelihood necessities. Based on review of literature, discussions with experts and observation made by the researcher, a list of 16 dimensions of perception of freedom from poverty were identified so as to compute their perception of freedom from poverty (Appendix I).

Measurement of Perception of freedom from poverty

Statements were prepared and rated on a five point continuum. (Strongly agree-score 5 to strongly disagree- score 1) Responses for each statement were collected and as the rating is on equal scale summated score for each individual was taken. The maximum and minimum score an individual attained could be 80 and 16 respectively.

3.5.1.2 Perception of freedom from insecurity

The Perception of freedom from insecurity was operationally defined as degree to which an individual is aware and interprets meaningfully the immunity and liberty from sexual and other forms of exploitation. Based on review of literature, discussions with experts and observations made by the researcher, a list of 16 dimensions of perception of freedom from insecurity were identified so as to compute their perception of freedom from insecurity (Appendix I).

Measurement of Perception of freedom from insecurity

Statements were prepared and rated on a five point continuum (Strongly agree - score 5 to strongly disagree - score 1). Responses for each statement are collected and as the rating is on equal scale summated score for each individual was taken. The maximum and minimum score an individual attained could be 80 and 16 respectively.

3.5.1.3 Social participation

It refers to the content and nature of participation of tribal people in various activities. Based on review of literature, discussions with experts and observation made by the researcher, a list of five dimensions of social participation were identified so as to compute their social participation. The dimensions include time spent for social activities, leadership competency, prosocial behaviour, involvement in public speaking skills and interpersonal skills.

Measurement of Social participation

Dimensions were fixed and relevant statements related to each dimension was prepared. Though there was different number of statements under each dimension, each statement was with equal importance and evaluated in five point continuum. Responses for time spent for social activities were recorded as actual time. Average of time spent was calculated, and its standard error was taken as σ/\sqrt{n} , where σ is defined as estimated standard deviation of the time spent for social activities. The original data was converted into five point continuum based on the standard normal classification as described below.

Value	Score
<Mean- 2 SE	1
Mean- 2 SE to Mean- 1 SE	2
Mean- 1 SE to Mean + 1 SE	3
Mean + 1 SE to Mean + 2 SE	4
>Mean + 2 SE	5

As the rating is on equal scale, summated score for each individual was taken.

Validity of the scale

To ensure that the obtained test measured the variable it was supposed to, validity of the scale has to be established. According to Kerlinger (2004) content validity is the representativeness or sampling adequacy of the contents, the substance, the matter and topics of a measuring instrument.

Content validity of the attitude scale was established in two ways; first, the items selected for inclusion in scale were based on extensive review of literature. Secondly, the opinion of panel of judges were obtained to find out whether the items suggested were suitable for inclusion in the scale or not.

Reliability of the scale

A scale is said to be reliable when it produces results with high degree of consistency when administered to the same respondents at different times. In this study reliability of the scale was determined by split-half method. The scale administered to the 30 respondents was divided into two equal halves based on odd-even numbers of statements. The scores on the odd numbered items as well as the scores of the even numbered items of same respondents were correlated using Rulon formula. The formula used was

$$r_{tt} = 1 - \sigma_d^2 / \sigma_t^2$$

The obtained r_{tt} value was 0.911, which indicated a high reliability of the scale.

Scale of social participation

1. Time spent for social activities

On an average how much time do you spend for social activities (In hrs.)?

2. Leadership competency

Where will you place yourself in the leadership continuum with regard to your leadership attributes?

Very low	low	medium	high	very high
1	2	3	4	5

How do you utilize your level of competency of leadership in the welfare of society?

Most often	often	seldom	rare	very rare
5	4	3	2	1

3. Prosocial behaviour (Prosocial behaviour can be operationally defined as involvement in desirable activities for the welfare of community and society)

How frequently do you participate in social/community functions (marriage, funeral, festivals in temples, church etc.,)

Most often	often	seldom	rare	very rare
5	4	3	2	1

Do you think you have the ability to understand the problem of others?

Most often	often	seldom	rare	very rare
5	4	3	2	1

How often you intervene in resolving the problems of others?

Most often	often	seldom	rare	very rare
5	4	3	2	1

4. Involvement in public speaking skills

Where will you place yourself in the public communication skill continuum with regard to your public speaking skill?

Excellent	good	fair	poor	very poor
5	4	3	2	1

How often do you involve in public speaking?

Most often	often	seldom	rare	very rare
5	4	3	2	1

5. Interpersonal skills

Where will you place yourself in the interpersonal communication skill continuum with regard to your capability in interpersonal communication as well as you in making interpersonal relationships?

Excellent	good	fair	poor	very poor
5	4	3	2	1

3.5.2 Operationalisation and Measurement of the Independent Variables

3.5.2.1 Age

It refers to the number of calendar years completed by the respondents at the time of interview. This variable was measured directly by asking the respondent the number of years he/ she had completed at the time of investigation.

3.5.2.2 Educational Status

Educational qualification was operationalised as the extent of formal learning possessed by the respondents who were above 21 years old at the time of interview. They were asked directly about their educational qualifications.

3.5.2.3 Family Size

In the present study family size was measured by taking into consideration the specific number of members in the family of the respondents living together. The respondents were asked directly that how many members were there in their family.

3.5.2.4 Alcoholism

Alcoholism refers to the extent of consumption of alcohol by the respondents which would lead to ill health, conflicts in his family and also unproductive use of family income. Measurement schedule was developed for the study. The respondents were asked directly whether he had a habit of consuming alcohol. The scoring procedure in terms of frequency of intake was as follows.

Daily	More than once in a week	Weekly	Monthly	Occasionally
1	2	3	4	5

3.5.2.5 Political Orientation

Political orientation is operationally defined as the degree to which a person recognizes the power relations existing in the society and believes that democracy, distributive justice and political parties are relevant and important for

resolving the problems of people in order to achieve the objective of people sustainable development.

The scale developed by Kumaran (2008) with slight modifications was used for this study. It consisted of ten statements in which the responses were collected on a five point continuum (Strongly agree - score 5 to strongly disagree - score 1) for positive statements and the scoring was reversed in the case of negative statements (Appendix I).

3.5.2.6 Environmental Orientation

This was operationalised as the degree to which tribal people was concerned about his environment. The scale developed by Sreevalsan (1995) was used with some modification. The scale consisted of five statements and the respondents were asked to state their agreement or disagreement to each of the statements and scores of two and one were assigned for agree and disagree respectively (Appendix I). The responses were summed up to obtain the environmental orientation score. The score range was between 25 and five.

3.5.2.7 Media Exposure

This was measured by the procedure followed and used by Prasadha (2006) with slight modifications. The score of an individual respondent is the sum of scores overall of the items. The possible score ranged from 6-18.

Sources	Frequency		
	Regularly (3)	Occasionally (2)	Never (1)
News paper			
Radio			
Television			
Films			
Magazines			
Internet			

3.5.2.8 Monthly Income

The monthly income of the family was operationalised as the yearly average income of the family of the respondent in cash. Different sources of income of the family were elicited from the respondents and the average monthly income of the family was calculated.

3.5.2.9 Body Mass Index (BMI)

Body mass index is defined as the individual's body weight divided by the square of his or her height. The formulae universally used in medicine produce a unit of measure of kg/m^2 .

Procedure adopted for anthropometric measurements:

Weight for age

For weighing platform weighing balance was used as it is portable and convenient to use in the field. The weighing scale was checked periodically for accuracy. The scale was adjusted to zero before each measurement. The subject was having minimum clothing and was asked to stand on the platform of the scale, without touching anything and looking straight ahead. The weight was recorded to the nearest 0.25 Kg. Each reading was taken twice to ensure correctness of the measurement.

Height for age

To determine height the anthropometric rod designed by the National Institute of Nutrition was used. The rod was placed perpendicular to the ground, taking care to see that the floor was even and not rough. The subject was asked to remove the slippers, stand with the centre of the back touching the scale, with the feet parallel and heels, buttocks, shoulders and back of the head touching the rod. The head was held comfortably erect, the arms hanging loosely by the side. The ruler was held on the top of the head in the centre, crushing the hair at right angle

to the scale and the height read off from the lower edge of the ruler to the nearest 0.5 cm. Each reading was taken twice to ensure correctness of the measurement.

The current value settings are as follows: a BMI of less than 16.0 may indicate severely underweight, a BMI of 16.0 to 18.5 suggests the person is underweight, a BMI of 18.5 to 25 indicate optimal weight, a value from 25 to 30 suggests the person is overweight, obese class I value ranges from 30 to 35, Class II from 35 to 40 and a number above 40 suggests that the person falls in obese Class III.

3.5.2.10 Indebtedness

Indebtedness is operationally defined as the total debt in terms of money, a tribe owes to various money lending sources at the time of investigation.

3.6. Methods used for data collection

An interview schedule including all aspects mentioned above was prepared. All the 120 respondents were contacted in their respective houses and rapport was established. The questions were put in a conversational manner and responses were transcribed in the schedule itself. In case of responses, which were not clear, rechecking was done.

3.7 Statistical tools used for the study

The data collected from the respondents were scored, tabulated and analysed using suitable statistical methods. Keeping in view the objectives of the study and amenability the data were subjected to different statistical tools. A brief description of the tools used is given below.

(A) Tabulation

1. Averages

The mean scores for the variables were worked out to make suitable comparisons wherever necessary.

2. Percentage analysis

Percentage was done to make simple comparison wherever necessary and for easy comparison.

(B) Statistical analysis

3. Canonical correlation

Canonical correlation deals with the correlation between a pair of linear combination of set of dependent variables and independent variables namely canonical variables. The number of pairs of canonical variables is exactly the least number of variables either in the dependent set or in the independent set.

RESULTS AND DISCUSSION

4. RESULTS AND DISCUSSION

The findings of the study in line with the objectives set forth are presented here, with appropriate discussions, under the following titles.

- 4.1 Identification and prioritization of livelihood issues of tribal women
- 4.2 Perception of freedom from poverty of tribal women
- 4.3 Perception of freedom from insecurity of tribal women
- 4.4 Scale of social participation of tribal women
- 4.5 Profile characteristics of the Attappadi tribal women
- 4.6 Canonical correlation analysis explaining the livelihood issues of tribal women

4.1 Identification and prioritization of livelihood issues of tribal women

This section reveals the identification and prioritization of livelihood issues of tribal women of Attappadi, with respect to various constraints experienced by them and it includes the discussions relevant to those constraints and issues. Important livelihood issues were identified through different methods like focus group discussions, participant observations, discussion with key informants etc. The livelihood issues thus identified were then subjected to judges rating for selecting important and relevant livelihood issues. The selected issues were then administered to the respondents for prioritizing the issues.

4.1.1 Livelihood issues of tribal women according to its priority and importance as perceived by the tribal women

Table 1. Livelihood issues of tribal women according to its priority and importance as perceived by the tribal women

Sl. No.	Livelihood issues	Rank
1	Alcoholism	I
2	Wild animal menace in agricultural lands	II
3	Land alienation	III
4	Addiction to narcotics	IV
5	Depletion of natural resources like forest and water bodies	V
6	Inadequate transport facilities	VI
7	Inadequate educational facilities	VII
8	Inadequate medical facilities	VIII
9	Social exclusion and discrimination	IX
10	Cultural invasion by non tribals	X
11	Gender discrimination at work places	XI
12	Inadequacy of food as per nutritional requirements	XII
13	Inadequacy of water for irrigation	XIII
14	Addiction to chewing stimulants like betel, pan masala etc.,	XIV
15	Lack of electricity connectivity	XV
16	Domestic violence	XVI
17	Unemployment	XVII
18	Poverty	XVIII
19	Ill health	XIX
20	Inability to utilize welfare interventions of the government	XX
21	Unreach of government supports and other welfare measures.	XXI
22	Financial exploitation by non tribals	XXII
23	Inadequate access to safe drinking water	XXIII
24	Physical insecurity due to random entry of wild animals	XXIV
25	Inadequate housing facilities	XXV
26	Nutritional insecurity	XXVI
27	Forest fire during summer	XXVII
28	Land slides	XXVIII
29	Sexual exploitation	XXIX
30	Inadequacy of safe food	XXX

The Table 1 clearly indicates that the major livelihood issues as perceived by the tribal women, which are ranked according to its importance and priority are alcoholism, wild animal menace in agricultural lands, land alienation, addiction to narcotics, depletion of natural resources like forest and water bodies, inadequate transport facilities, inadequate educational facilities, inadequate medical facilities,

social exclusion and discrimination, gender discrimination at work places, inadequacy of food as per nutritional requirements.

4.1.2 Livelihood issues of tribal women as perceived by the non - tribal social activists and extension functionaries

Table 2. Livelihood issues of tribal women as perceived by the non - tribal social activists and extension functionaries

Sl. No.	Issues	Rank
1	Poverty	I
2	Alcoholism	II
3	Inadequacy of food as per nutritional requirements	III
4	Wild animal menace in agricultural lands	IV
5	Depletion of natural resources like forest and water bodies	V
6	Land alienation	VI
7	Inadequate transport facilities	VII
8		VIII
9	Inadequate educational facilities	IX
10	Inadequate medical facilities	X
11	Skeptical attitude of tribes people Inadequate access to safe drinking water	XI
12	Lack of initiative and motivation	XII
13	Lack of health awareness and importance of personal cleanliness	XIII
14	Rigid and closed cultural system	XIV
15	Gender discrimination at work places	XV
16	Inadequacy of water for irrigation	XVI
17	Reluctance for social interaction	XVII
18	Absence of life skills like communicative skills, creative thinking, critical thinking, problem solving etc.,	XVIII
19	Addiction to chewing stimulants like betel, pan masala	XIX
20	Ill health	XX
21	Domestic violence	XXI
22	Inadequacy and access to quality education	XXII
23	Addiction to narcotics	XXIII

24	Negative attitude of the mainstream society towards tribes people and tribal development interventions	XXIV
25	Unemployment	XXV
26	Cultural invasion by non tribals	XXVI
27	Nutritional insecurity	XXVII
28	Social exclusion and discrimination	XXVIII
29	Non reach of government supports and other welfare measures	XXIX
30	Lack of aspiration for social, economic & educational improvement	XXX
31	Financial exploitation by non tribals	XXXI
32	Inability to utilize welfare interventions by the government	XXXII
33	Physical insecurity due to random entry of wild animals	XXXIII
34	Inadequate housing facilities	XXXIV
35	Lack of electricity connectivity	XXXV
36	Irrational belief systems and rituals	XXXVI
37	Forest fire during summer	XXXVII
38	Inadequate exposure to scientific innovations	XXXVIII
39	Sexual exploitation	XXXIX
40	Land slides	XL

From table no.2 it is evident that poverty, alcoholism, inadequacy of food as per nutritional requirements, wild animal menace in agricultural lands, depletion of natural resources like forest and water bodies, land alienation, inadequate transport facilities, inadequate educational facilities, inadequate medical facilities, skeptical attitude of tribes people, inadequate access to safe drinking water, lack of initiative and motivation etc., are the major livelihood issues of tribal women as perceived by the non - tribal social activists and extension functionaries.

A comparative analysis of these livelihood issues as perceived by tribal and non-tribal people highlight an important incongruence with respect to the perception of livelihood issues. A very important livelihood issue like poverty was not identified and recognized as an important livelihood issue by tribal women. In general poverty is the condition where people's basic needs for food, clothing and shelter are not being met. A rank of 18 was given by tribal women for poverty whereas poverty was

perceived to be the most important livelihood issue by the non-tribal respondents. These differential perceptions drive home an important aspect with respect to needs and aspirations of tribespeople. They are unaware of their real situation and pre-requisites for their development.

They were unaware of their relative poverty also they were oblivious to their developmental needs. Many causes could be attributed to this situation. It was observed that most of them were guided by the pleasure principle and lack of thrift proneness as their way of life. They were satisfied with whatever they had, in every aspects of life like food, clothing and shelter. They were not at all aware of opportunities and possibilities of leading a standard of life, desired by the mainstream society. Importance of nutrient rich diet for a sustainable health life, a better housing for safe and comfortable life, a better standard of living etc. were not considered as important and relevant. Even if they had one meal a day, they seem satisfied without any complaint. Almost all the tribespeople had National Rural Employment Guarantee Scheme (NREGS) as their main source of employment which shows the popularity of this scheme among the tribal communities. However, this raises concern about the sustainability of the traditional livelihood options of tribal people. This shows the skewed and unscientific nature of the income and employment generation schemes introduced by the government against the interests of the most backward tribespeople.

They are still not ready to accept and utilize meaningfully the opportunities and facilities extended to them by the government and other non-governmental organizations. Their philosophy of life seems to be “living in the present and not concerned much about the future”, it makes the situation worse. Social development entails the meaningful understanding of development needs on the part of marginalized sections. Converting needs in to felt needs is the professional responsibility of the extension professionals. The hitherto followed prescriptive approach of development as a part of trickle down paradigm could not inspire and

motivate the marginal section of people to make use of developmental interventions. As a result efforts and expenditure by government on tribal development did not yield the expected results.

Majority of the tribespeople were addicted to alcohol irrespective of gender. Alcohol is easily available in the licensed shops and also is illicitly produced in some of the colonies. The tribal people were spending their major share of income towards buying alcohol, leading the family into a financially unstable state, which ultimately resulting in problems like domestic violence.

Owing to deforestation, large numbers of wild animals lost their natural habitat which made them in to invade the agricultural lands of the tribespeople. As a result it had become a herculean task for them to cultivate crops after driving the wild animals away from the agricultural lands. The major reason for the backward tribes' over dependence on agriculture sector for their livelihood is the lack of education and skill to move to other avenues. Only possible employment option for them is to work either as agricultural or as non-agricultural labourers.

Land alienation was an important issue for the tribespeople as they lost their ancestral land which had been using for cultivation. Meanwhile they lost their land, they had stopped cultivating their traditional food crops like *cholan* (sorghum), *thina* (foxtail millet) etc. that indirectly lead to the inadequacy of nutrition in their daily diet. Lack of awareness about nutritional requirements mostly leaves the tribal women weak, anaemic and they suffer from various diseases.

Land is the very basis of tribal identity a particular biophysical environment where generations of tribespeople lived, is very important as the traditional livelihood options and cultural existence are confined within this. The state has recognised this principle by declaring tribal land inalienable by law. But much of it is being alienated by fraudulent means in favour of non-tribal individuals and even public sector enterprises. This is mainly by faulty tenancy legislation. Tribals live in

resource rich regions. They were displaced with little consideration for their future. Non-tribals took advantage of this tribal belief and occupied their land.

The encroachers of the tribal land exploited the adivasis more unscrupulously than their former rivals, the British or landlords. The new masters and the government bypassed the dalit and adivasi interests by focusing on giving land rights to tenants only. The pathetic tribal situation provided an opportunity for the extremist left political outfits to make use of for establishing their organization and achieving their political agenda. In fact it was the apathetic attitude displayed by successive governments that made the issue more complicated. Thus the adivasi issue in Kerala presents a dismal picture. As the government remained indifferent, the adivasis have from time to time tried to assert their land rights but were brutally crushed by unleashing the state violence as at Muthanga, Cheengeri, Chengara and other places in tribal belts. Land alienation had resulted in several serious problems among the tribal people, *ie.*, increased poverty, decreased employment opportunity, tribal migration, tribal labourer exploitation, tribal women exploitation, conflicts between tribal people and non-tribals, increased the disparity between the rich and the poor tribal people, developed extremism and naxalism in tribal areas and brought in law and order problem in tribal areas. Because of conscientisation and empowerment, tribal people are now convinced about the importance of land for their very survival. Harassments from government servants especially of the forest department need to be solved state wide. Tribals should have complete ownership of a piece of land they stay.

The non-tribals not only invaded their land but also started exploiting the land, forest, rivers etc. After the invasion of non-tribals the tribals lost their traditional rich forest by the uncontrolled deforestation by them. That resulted in the complete changes in the ecosystem of the area. Shortage of rain, draining of water sources, increased temperature, forest fire etc. are some of the result of their encroachment.

The next main issue found was addiction to narcotics, same as in the case of alcoholism, irrespective of gender both men and women were addicted to betel, pan like chewing stimulants and a minor group of them were addicted to *ganja*. These habits eventually resulted into physical, mental as well as financial instability in their life. The non tribals took it as an opportunity to attract the tribal people for their personal benefits.

Inadequacy of transport and medical facilities made their daily life so much difficult as anything else, especially in the case of emergency hospital needs. Though there are primary health centres, its services are very limited and not easily reachable. Advanced check-up's and treatments are not available and affordable to the majority of the tribal people. Health education and proper sanitary amenities are far from them. Regular medical clinics or camps, special assistance to diagnose and advance treatments in cities can make their life better. The standards of living of the tribespeople were remarkably low due to the inadequate educational facilities available to them. Education could bring in change in their world view and give them hopes for a better tomorrow. Assistance to education can change the plight of the poor young girls to find a skilled employment and think about a family. Tribespeople are far behind others in educational attainment and this will have far reaching implications on their employability and livelihood. Lack of education reduces the socio-economic opportunities for inclusive development drives of the scheduled tribes.

Another major issue of tribal people is social exclusion and deprivation. The main reason behind it is they are not organized and politically mobilized. Many social and historic reasons can be attributed to this. Keeping the tribespeople unorganized seems to protect the vested interests of the section of a people who acquired land and other capital assets through illegal ways. The tribal people were always deprived of food, shelter, education etc. The non-tribals never considered

them as an individual with their own identity. They always treated them as backward or inferior. In the case of public functions as well as in the case of meetings held by public representatives also condition is not different. The skeptical attitude of tribespeople was another major concern. The suspicious mindset of tribespeople were always been a barrier for their development. The previous experiences made the tribal people to look at everyone at suspicion and distrusted. A series of exploitations and cheating they experienced from the mainstream society for centuries reminds them to be suspicious about everything. That resulted in the strengthening of skeptical attitude of tribal people. Lack of initiative and motivation of tribal women also coming in the same line. As they were treated inferior and exploitations of centuries made them to disbelief the non-tribals and the programs and projects implemented by them for the welfare of tribals.

4.2 Perception of freedom from poverty of tribal women

Table 3. Perception of freedom from poverty of tribal women N=120

Sl.no	Category	Score range	Agali		Pudur		Sholayur		Total	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Low	16-48	11	28	3	8	0	0	14	12
2	High	48-80	29	72	37	92	40	100	106	88
	Total		40	100	40	100	40	100	120	100

Perception of freedom from poverty was found to be high among the respondents. In Agali panchayat 72 per cent, in Pudur 92 per cent and Sholayur cent per cent of the respondents were having a high level of perception of freedom from poverty.

The result of the table show cases that the tribal women were less conscious about their actual living conditions. This was the actual situation existing there. Even

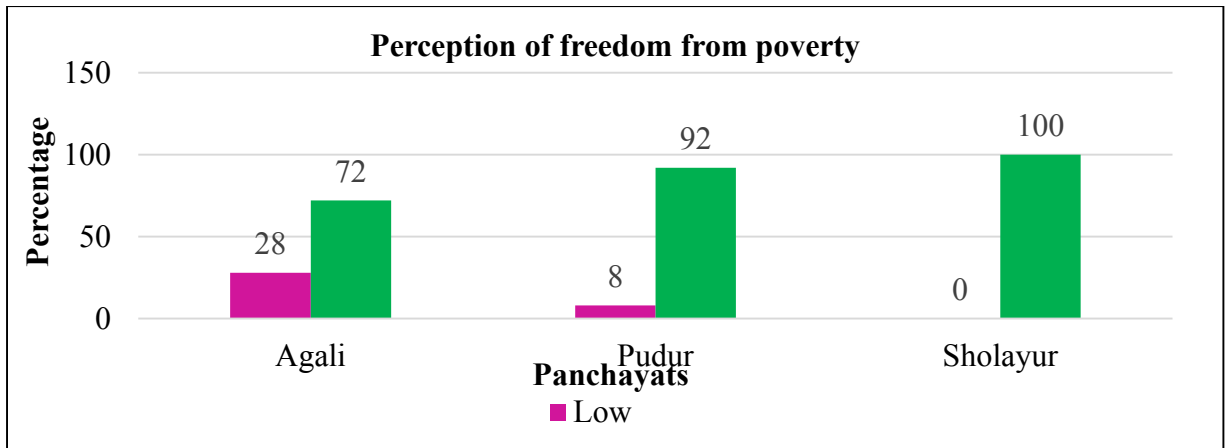


Figure 1. Perception of freedom from poverty of tribal women

though they were facing situations like infant mortality due to malnutrition, they had not realized that one of the reasons behind it was poverty yet.

They were unaware of their relative poverty also they were oblivious to their developmental needs. Many causes can be attributed to this situation. It was observed that most of them were guided by the pleasure principle and lack of thrift proneness as their way of life. They were satisfied with whatever they had, in every aspects of life like food, clothing and shelter. They were not at all aware of opportunities and possibilities of leading a standard of life, desired by the mainstream society. Importance of nutrient rich diet for a sustainable health life, a better housing for safe and comfortable life, a better standard of living etc., were not considered as important and relevant. Even if they had one meal a day, they seem satisfied without any complaint. Almost all the tribespeople had National Rural Employment Guarantee Scheme (NREGS) as their main source of employment which shows the popularity of this scheme among the tribal communities. However, this raises concern about the sustainability of the traditional livelihood options of tribal people. This shows the skewed and unscientific nature of the income and employment generation schemes introduced by the government against the interests of the most backward tribespeople.

4.3 Perception of freedom from insecurity of tribal women

Table 4. Perception of freedom from insecurity of tribal women N=120

Sl. No.	Category	Score range	Agali		Pudur		Sholayur		Total	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Low	16-48	4	10	6	15	3	8	13	11
2	High	48-80	36	90	34	85	37	92	107	89
	Total		40	100	40	100	40	100	120	100

Perception of freedom from insecurity of tribespeople was found to be very high (89 per cent). The results of panchayat wise analysis also shows similar results like that of the total. The results of table 4 clearly explains the living ambience of tribal society. The tribal women found themselves free from any kind of insecurity in their society. In contrast to the prevailing conditions in the mainstream society, gender discrimination is not at all a problem among the tribespeople. Even though domestic violence is rampant there, the tribal women did not consider it as a violation of their rights. They believe that it is their husband's right and were always ready to accept it as a part of their culture.

Majority of the tribal women believed that they were secure in their hamlets. In fact they don't realize the insecurities and exploitations they were being experienced.

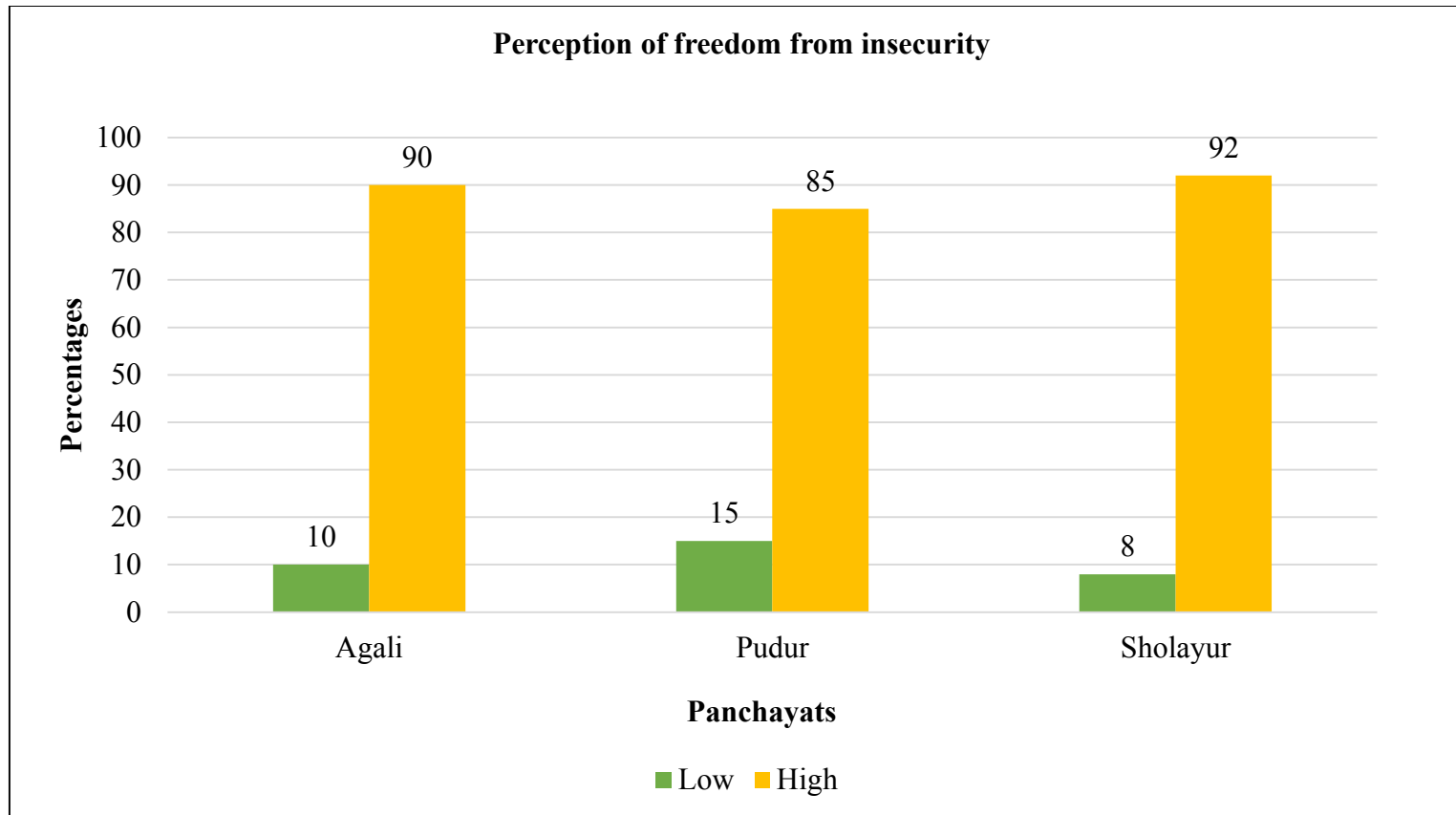


Figure 2. Perception of freedom from insecurity of tribal women

4.4 Scale of social participation of tribal women

Table 5. Scale of social participation of tribal women N=120

Sl. No	Category	Score range	Agali		Pudur		Sholayur		Total	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
2	Low	5-25	36	90	26	65	20	50	82	68
3	High	25-45	4	10	14	35	20	50	38	32
	total		40	100	40	100	40	100	120	100

Table 5 revealed that social participation of the tribal women of Attappadi area was observed to be low. That is 68 per cent of the tribal women were having a low level of social participation. Analyzing the results of each panchayat, it could be seen that in the case of Agali 90 per cent, in Pudur 65 per cent and at Sholayur 50 per cent of them were having a low level of social participation. The skeptical attitude of tribals along with the lack of initiative and motivation was the major reason behind their lower level of social participation. Simultaneously, they were facing social exclusion and discrimination on the part of non tribals living in their area. The tribal people were not treated equally with non-tribals in every social activities. In the meantime the developmental activities from the part of government as well as from AHADS (Attappadi Hill Area Development Society) had created a perceptible change in their life. Introduction of Kudumbasree program had also brought in

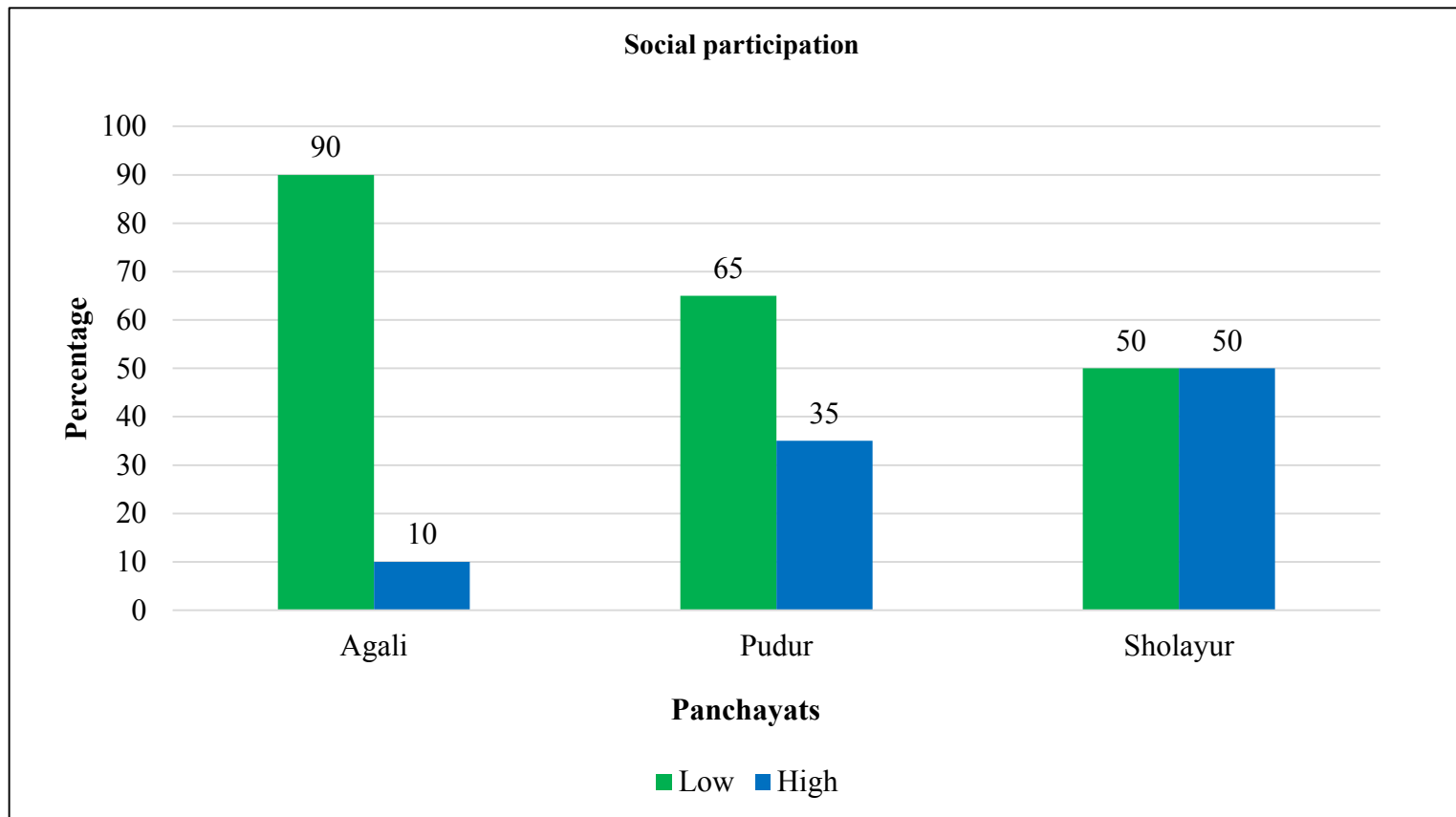


Figure 3. Social participation of tribal women

significant changes to the tribal women in their attitude as well as in their approach to the various social activities.

4.5 Profile characteristics of the Attappadi tribal women

This section reveals the distribution of tribal women, with respect to various profile characteristics and it includes the discussions relevant to those characteristics. The variables studied under profile characteristics were age, educational status, family size, environmental orientation, political orientation, media exposure, alcoholism, monthly income, indebtedness and BMI (Body Mass Index).

4.5.1 Age

Table 6. Distribution of tribal women according to their age N=120

Sl. No	Category	Score range	Agali		Pudur		Sholayur		TOTAL	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Young	28	8	20	10	25	5	13	23	19
2	Middle	29-56	29	73	23	58	27	68	79	66
3	Old	57	3	7	7	17	8	9	18	15
	Total		40	100	40	100	40	100	120	100

From Table 6 it could be seen that two - third of the respondents belonged to middle age that is 66 per cent. Only 15 per cent came under old age category and the remaining 19 per cent belonged to young category. In the panchayat wise analysis, Agali panchayat had 20 per cent young respondents, 73 per cent were of middle age category and the rest seven per cent belonged to old age category. Coming to the second panchayat Pudur 25 per cent belonged to young category as in Agali panchayat, 58 per cent belonged to middle age and the remaining 17 per cent

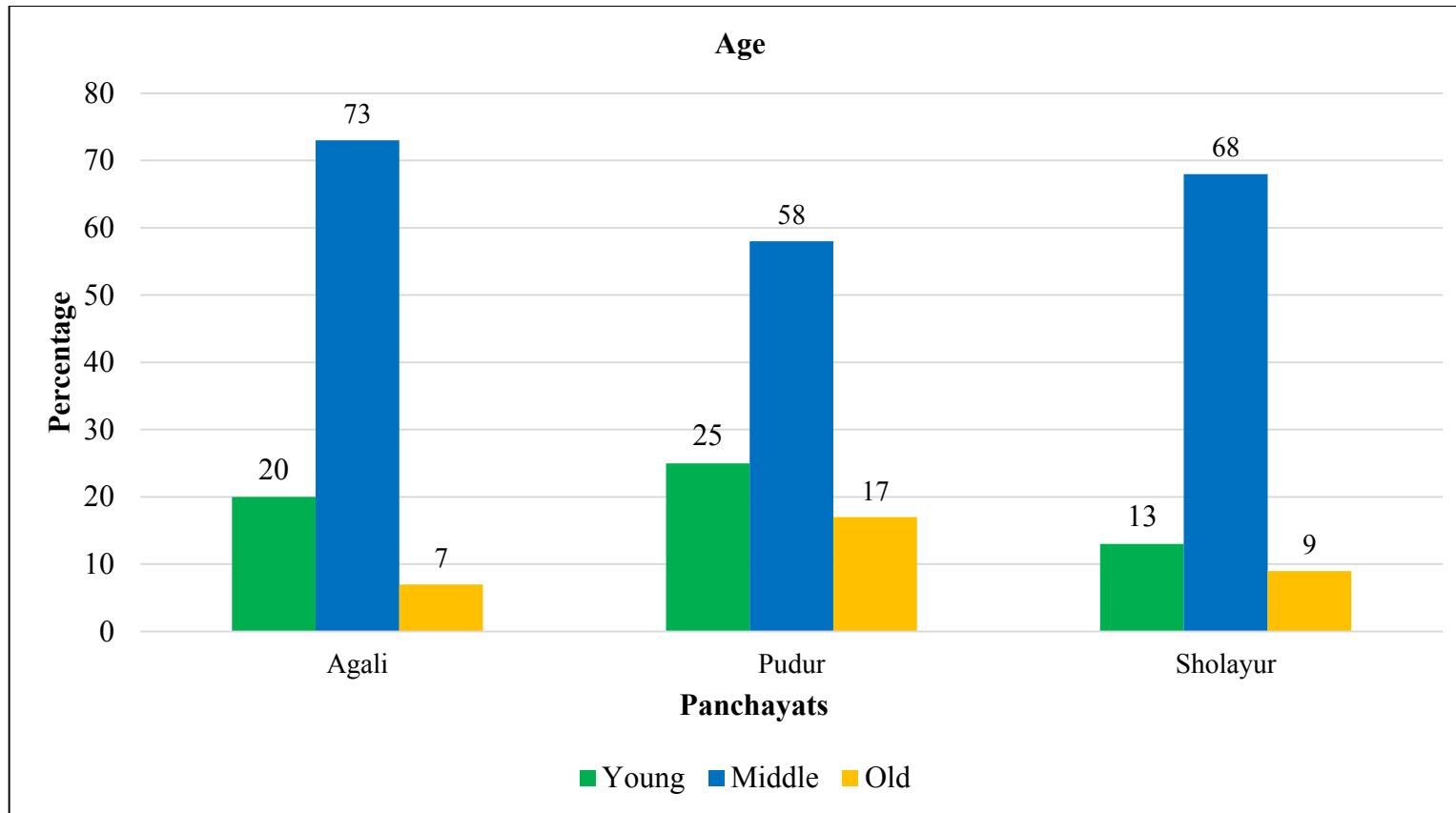


Figure 4. Distribution of tribal women based on age

belonged to old age group. In the case of Sholayur panchayat 13 per cent were young, 68 per cent were of middle age and nine per cent were of old age category.

4.5.2 Educational Status

Table 7. Distribution of tribal women according to their educational status N=120

Sl. No	Category	Agali		Pudur		Sholayur		TOTAL	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Illiterate	31	78	31	78	34	85	96	80
1	Primary level	0	0	1	2	0	0	1	1
2	Middle school	5	12	7	18	4	10	16	13
3	Higher secondary	2	5	1	2	2	5	5	4
4	Collegiate	2	5	0	0	0	0	2	2
	Total	40	100	40	100	40	100	120	100

The Table 7 reveals the most important fact about tribal women - the disturbing truth - that 80 per cent of the tribal women were illiterate and only two per cent of them were studied at college. Coming to the panchayat wise analysis, in Agali panchayat we could see that 78 per cent were illiterate, 12 per cent had obtained middle school and five per cent had completed higher secondary and college education respectively. The same educational scenario could also be seen in Pudur panchayat. In Pudur, 78 per cent were illiterate, two per cent obtained primary education, 18 per cent had completed middle school, and the remaining two per cent had obtained higher secondary education. Considering the panchayat Sholayur, the

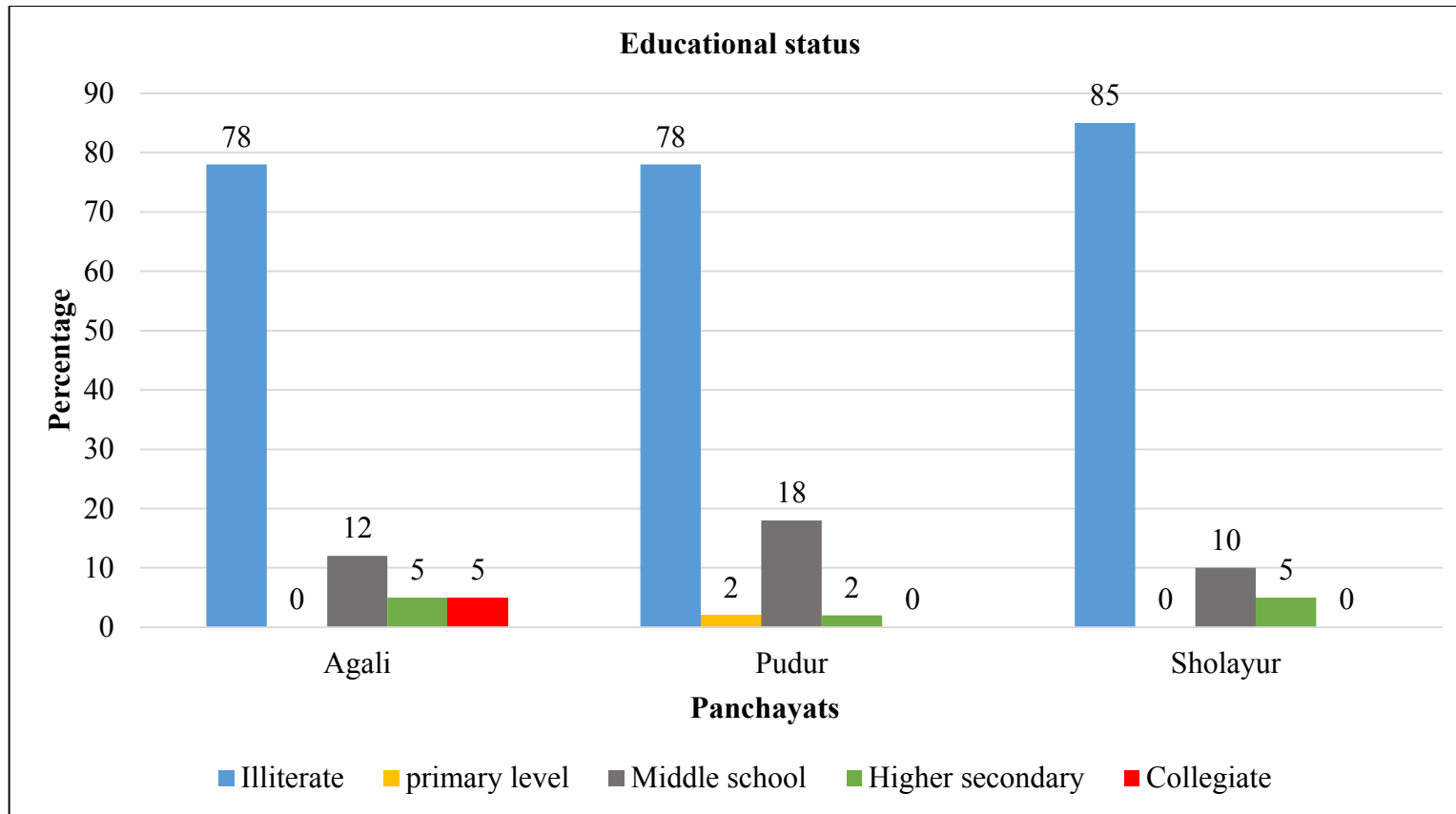


Figure 5. Distribution of tribal women based on educational status

situation was not different, 85 per cent were illiterate, 10 per cent were middle school and the remaining five per cent had obtained higher secondary education.

This study highlights the importance of inadequacy of development interventions that had executed at the Attappadi tribal area. In spite of the concerted effort by government by expending crores of rupees since from independence. There is no substantial change in educational status for this most deprived section of the society. A number of reasons can be attributed to this situation. Most important is the rampant corruption of government officials and political executives. Besides the welfare interventions were not translated meaningfully into actions either due to cumbersome bureaucratic procedures and callus attitude on the part of persons concerned. They were not conscientised and motivated regarding the importance of education in their life. The educational program and facilities designed for their welfare could not attract the minds of the tribespeople.

4.5.3 Family Size

Table 8. Distribution of tribal women with respect to family size N=120

Sl.No.	Score range	Agali		Pudur		Sholayur		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	≤3	17	42	21	53	20	50	58	48
2	4-5	21	53	19	47	16	40	56	47
3	≥6	2	5	0	0	4	10	6	5
	Total	40	100	40	100	40	100	120	100

From the table it could be seen that majority of the family were having 3 to 5 members. In Agali 42 per cent of the tribal women were having a family with members 3 or less than 3. Next 53 per cent of them were having 4-5 members and the remaining five per cent had more than or equal to 6 members in their family. In

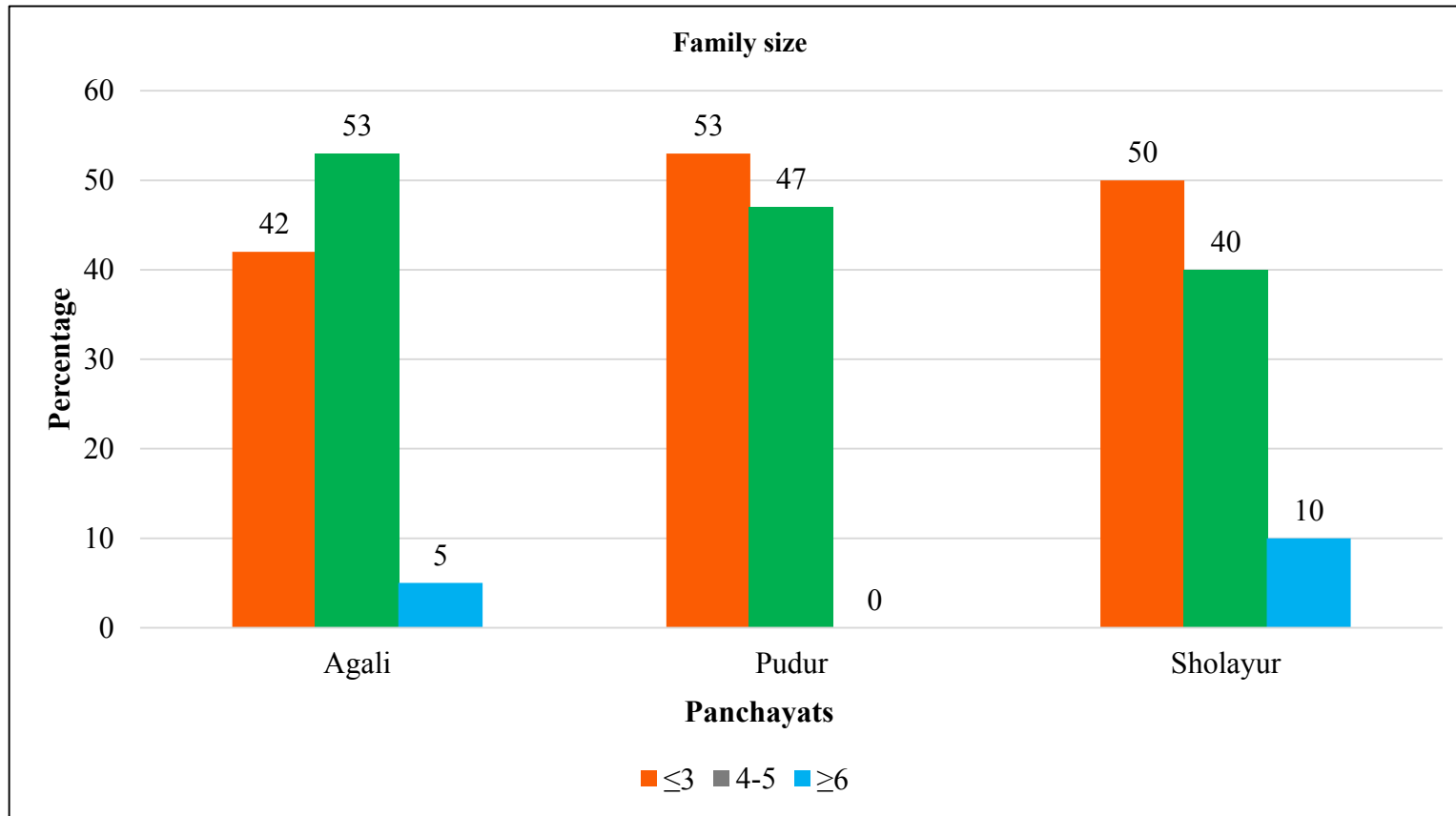


Figure 6. Distribution of tribal women based on family size

Pudur 53 per cent of the tribal women belonged to a family having less than or equal to 3 members and the rest 47 per cent tribal women came under the category of 4-5 members in their family.

In the case of Sholayur panchayat it could be seen the same pattern where 50 per cent of the family had members 3 or less than 3, while 40 per cent of them were 4-5 membered and the rest 10 per cent having 6 or more than 6 members in the family.

This major shift of tribespeople towards the nuclear family is owing to the fact that the government is providing each and every family, a house. Subsequently, the newly married couples prefer to setup a family of their own since they would get a free house without any particular effort. The life expectancy period of tribal people were considered to be in between 50 and 60. So that in most of the family old aged people were not seen. This was also a reason for their reduced family size.

4.5.4 Alcoholism

Table 9. Distribution of tribal women based on their consumption of alcohol N=120

Sl. No.	Category	Agali		Pudur		Sholayur		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Alcohol users	8	20	7	18	25	63	40	33
2	Teetotalers	32	80	33	82	15	37	80	67
	Total	40	100	40	100	40	100	120	100

This table 9 manifests with an alarming warning to the society. Contradictory to a popular perception, among the total tribal women surveyed 33 per cent were found to be using alcohol. The alcohol consumption statistics of the tribal women

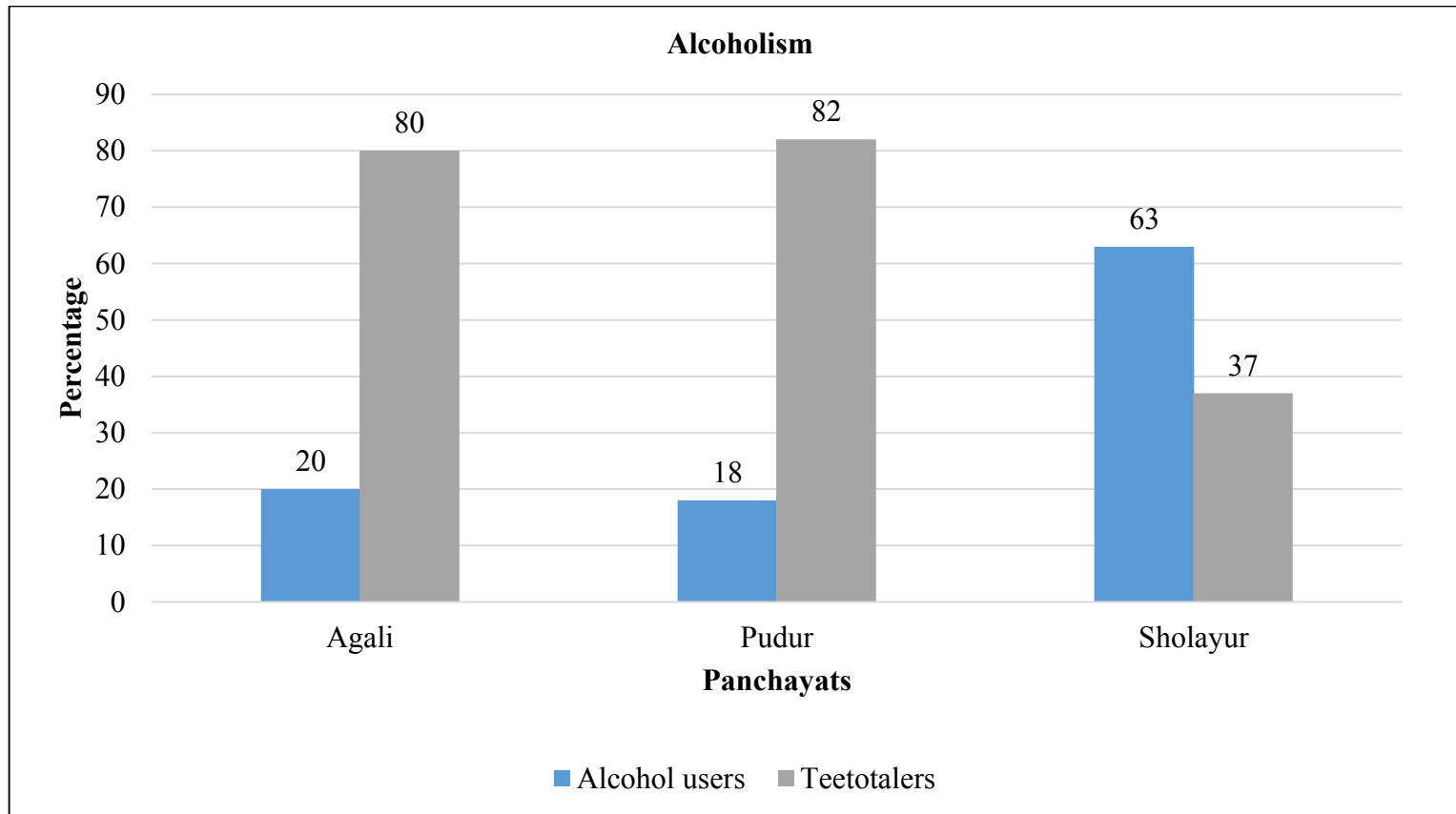


Figure 7. Distribution of tribal women based on alcoholism

from Agali, Pudur and Sholayur panchayats were 20 per cent, 18 per cent and 63 per cent respectively. This might be due to the unawareness of women especially about the after effects of alcohol consumption. More than that they find it extremely tranquilizing after the whole day work. Their philosophy of life seems to be “living in the present and not concerned much about the future”, *ie.*, most of them were guided by the pleasure principle and lack of thrift proneness as their way of life. They were satisfied with whatever they had.

One of the major challenge faced by the tribespeople is addiction to narcotics, which include betel leaf chewing, use of pan masala like things etc. All these habits had made their life much worst and dreary since it gravely affects the physical, mental as well as financial status of the tribespeople.

4.5.4.1 Frequency of alcohol consumption

Table 10. Distribution of alcohol using tribal women based on their frequency of alcohol consumption

N= 40

Sl. No	Category	Agali		Pudur		Sholayur		TOTAL	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Daily	0	0	1	14	16	64	17	42
2	More than once in a week	1	12	2	29	0	0	3	8
3	Weekly	4	50	2	29	1	4	7	18
4	Monthly	3	38	2	28	3	12	8	20
5	Occasionally	-	-	-	-	5	20	5	12
	Total	8	100	7	100	25	100	40	100

A bird's eye view of table 10 shows that alcohol consumption pattern by the respondents of three panchayats were differ significantly. In Sholayur panchayat 64

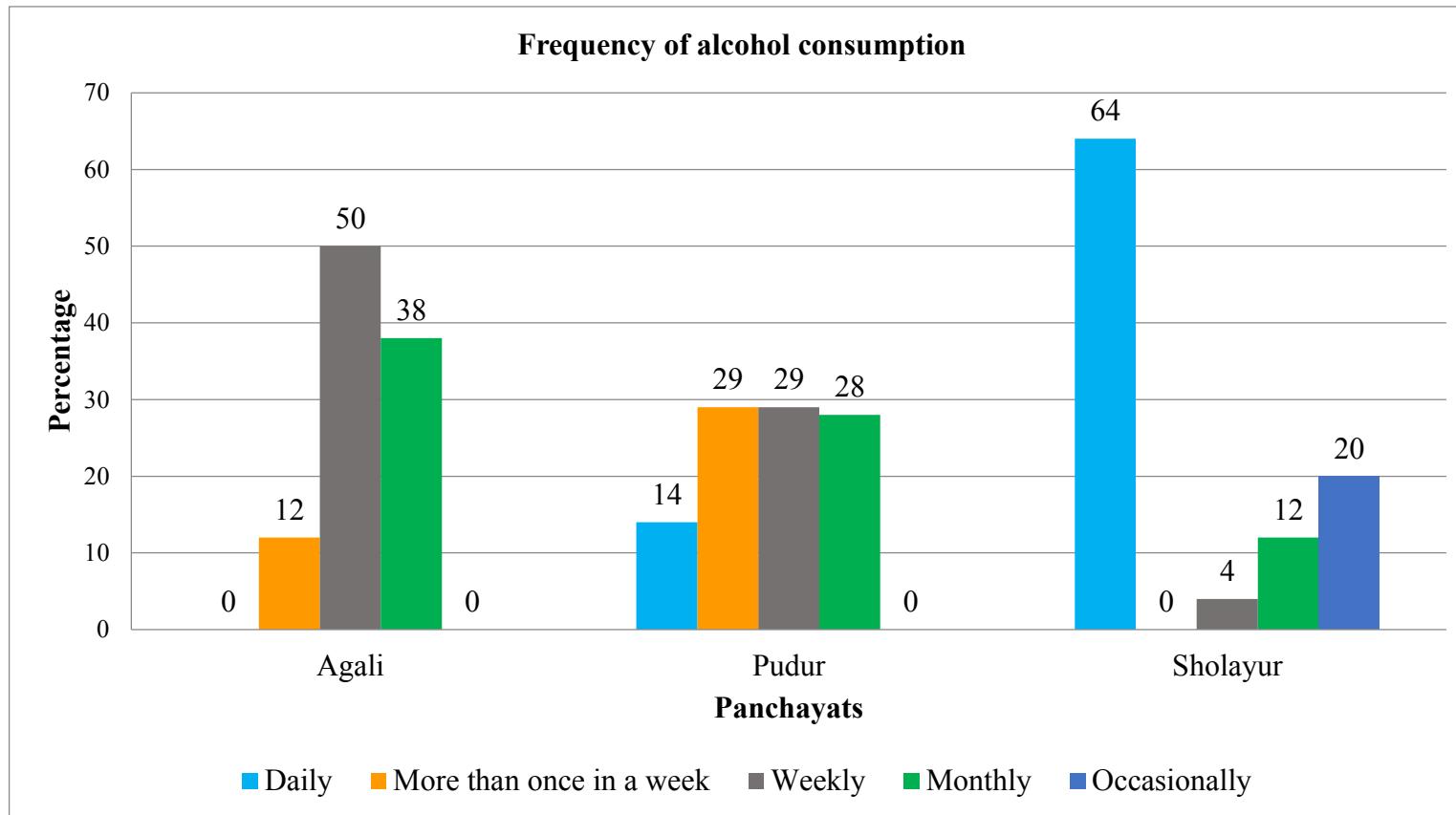


Figure 8. Distribution of tribal women based on frequency of alcohol consumption

per cent of the tribespeople were consuming alcohol on a daily basis. Analyzing the remaining alcohol users of the Sholayur panchayat, four per cent of them was using it weekly, 12 per cent monthly and 20 per cent consuming it occasionally. In the case of Agali, 12 per cent of them take alcohol more than once in a week, the majority 50 per cent of them take it weekly, and the remaining 38 per cent of them drunk occasionally only. Pudur 14 per cent of them were taking alcohol daily, 29 per cents of the respondents drink more than once in a week and the remaining 28 per cents of them were taking alcohol monthly.

4.5.5 Political Orientation

Table 11. Distribution of tribal women based on their political orientation N=120

Sl. No.	Category	Score range	Agali		Pudur		Sholayur		Total	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Low	5-27	11	28	18	45	16	40	45	37
2	High	27-50	29	72	22	55	24	60	75	63
	Total		40	100	40	100	40	100	120	100

The table 11 explains about the political orientation of the Attappadi tribal women. Among the total respondents 63 per cent were highly political orientated and the remaining 37 per cent were having a lower level of political orientation. Regarding to three panchayat, in Agali 72 per cent, in Pudur 55 per cent and in Sholayur 60 per cent of the women respondents were with high level of political orientation.

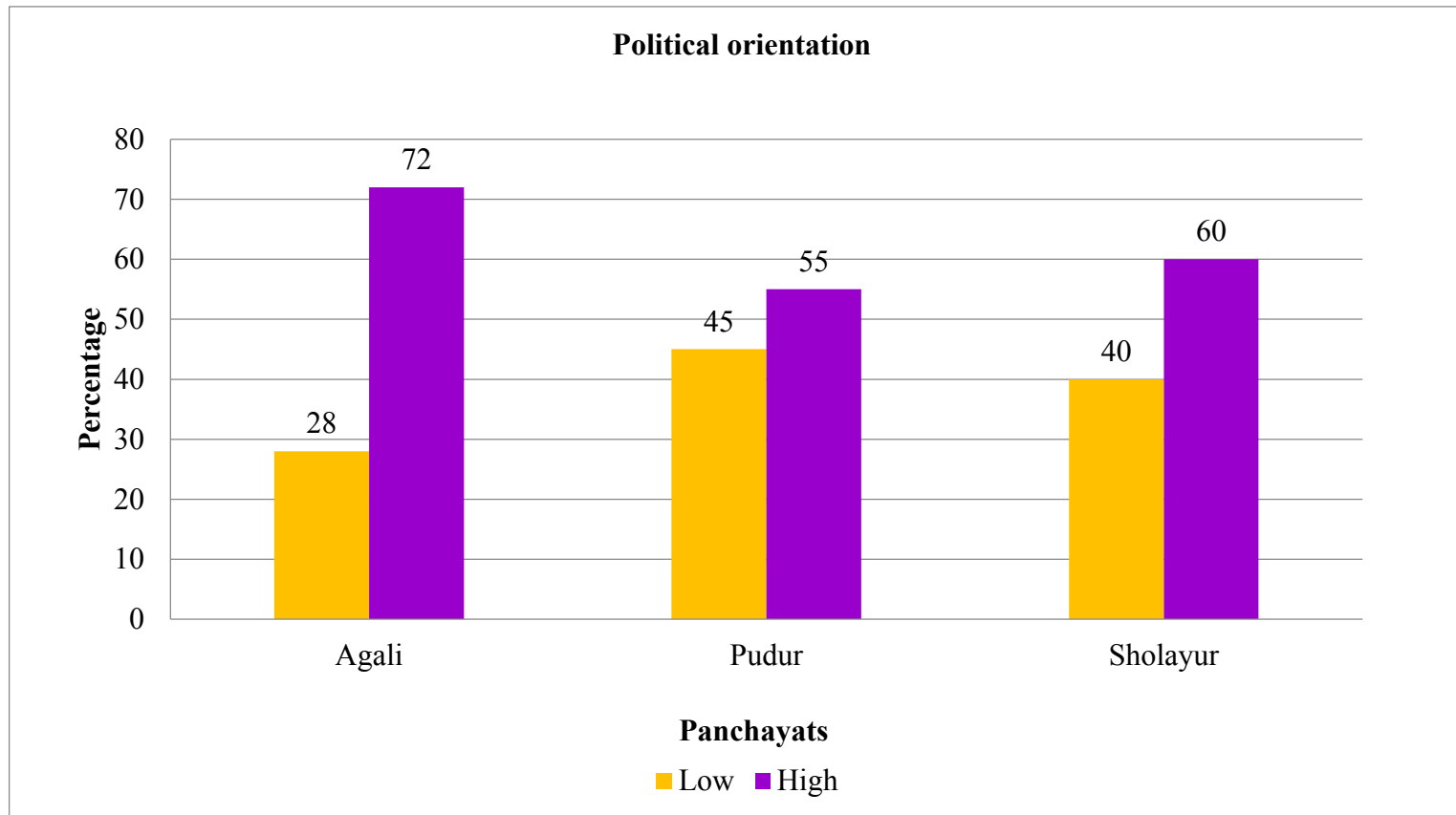


Figure 9. Distribution of tribal women based on political orientation

The tribespeople are actively participating in many social and political activities which are being conducted by a number of institutions and organizations. They were struggling for restoring the alienated lands for decades since independence. Developmental interventions by organizations like AHADS and political parties were also took an important role in conscientising and empowering the tribespeople. Consequently, participating in those activities had reflected in their awareness about what's happening around them, which has ultimately increased.

4.5.6 Environmental Orientation

Table 12. Distribution of tribal women based on their environmental orientation

		N=120								
		Score range	Agali		Pudur		Sholayur		Total	
Sl. No	Category		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Low	5-15	4	10	6	15	6	15	16	13
2	High	15-25	36	90	34	85	34	85	104	87
	Total		40	100	40	100	40	100	120	100

A perusal of table 12 reveals that 87 per cent of the respondents had a high level of environmental orientation. Though they had very poor educational background, they were very much concerned about their environment. Deforestation and other environmental issues have direct impact on the livelihood security and the very survival of the tribespeople, consequent to which they are more aware of the need of the protection and conservation of environment. Tribal Extension Officers, NGO's and voluntary organizations working among tribespeople also contributed in educating them regarding the importance of conservation of the environment. Soil conservation activities of agricultural department, silent valley agitation movement, afforestation activities by AHADS etc. also influenced the tribespeople to a very

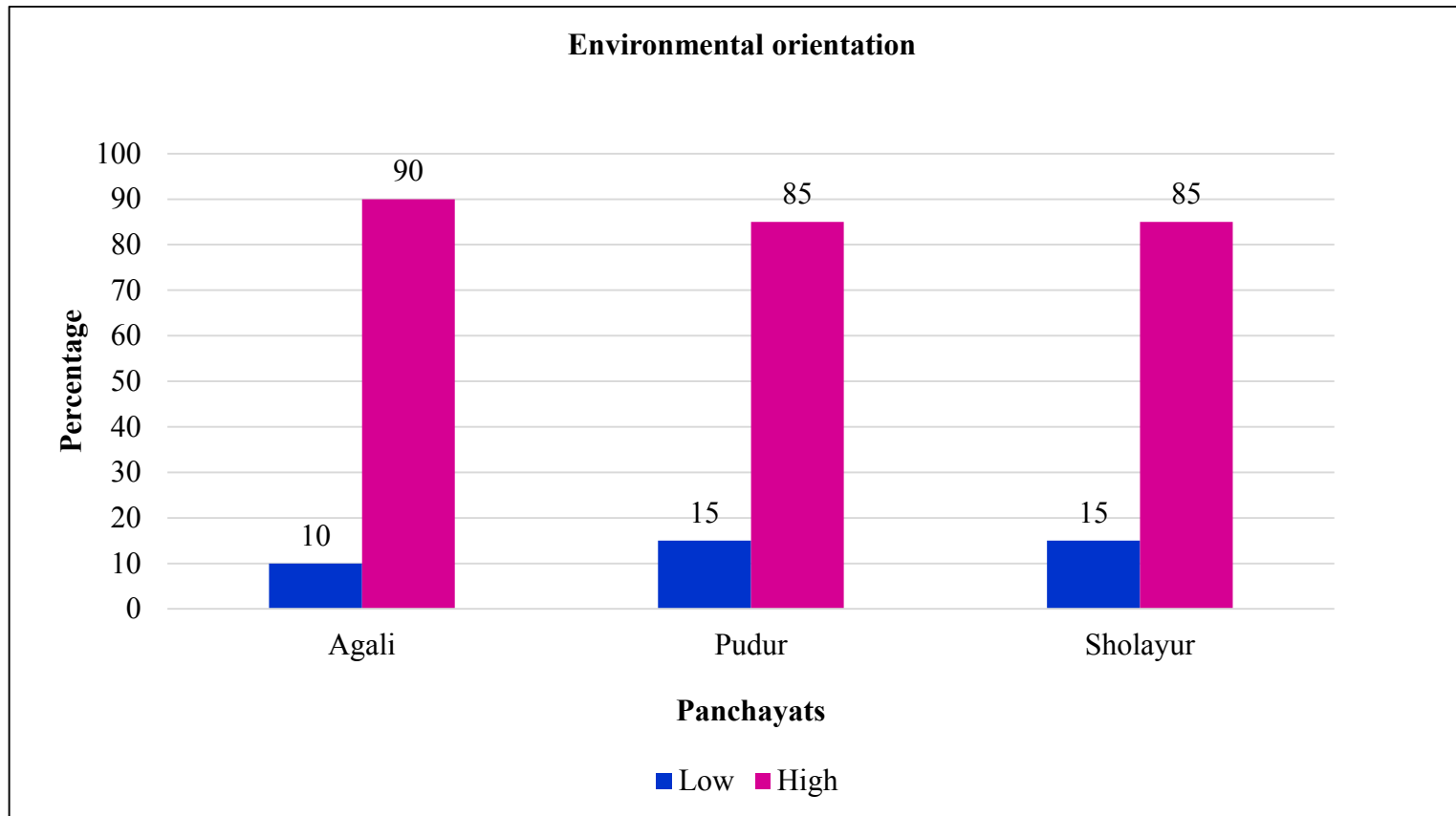


Figure 10. Distribution of tribal women based on environmental orientation

extend. This result founds to be in line with the findings of Shincy (2012) who reported the high level environmental orientation of *Irula* tribe of Attappadi and Anoop (2013) who reported the high level environmental orientation of *Paniya* tribe of Wayanad.

4.5.7 Media exposure

Table 13. Distribution of tribal women based on their media exposure N=120

Sl. No.	Category	Agali		Pudur		Sholayur		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Use of print media and internet	9	23	12	30	5	13	26	22
2	Using TV, radio and films	9	23	32	80	26	65	67	56

Upon scrutinizing table 13, it was found that only 22 per cent of the total respondents were using either print media or internet while 56 per cent of them were using TV, radio and films for media exposure. Poor educational background as well as low level of diffusion and adoption of modern communication technologies can be said as the major stumbling blocks. Another major hindrance was the inadequate electrical connectivity. This result founds to be in line with the findings of Anoop (2013) who reported the low level of mass media of *Paniya* tribe of Wayanad.

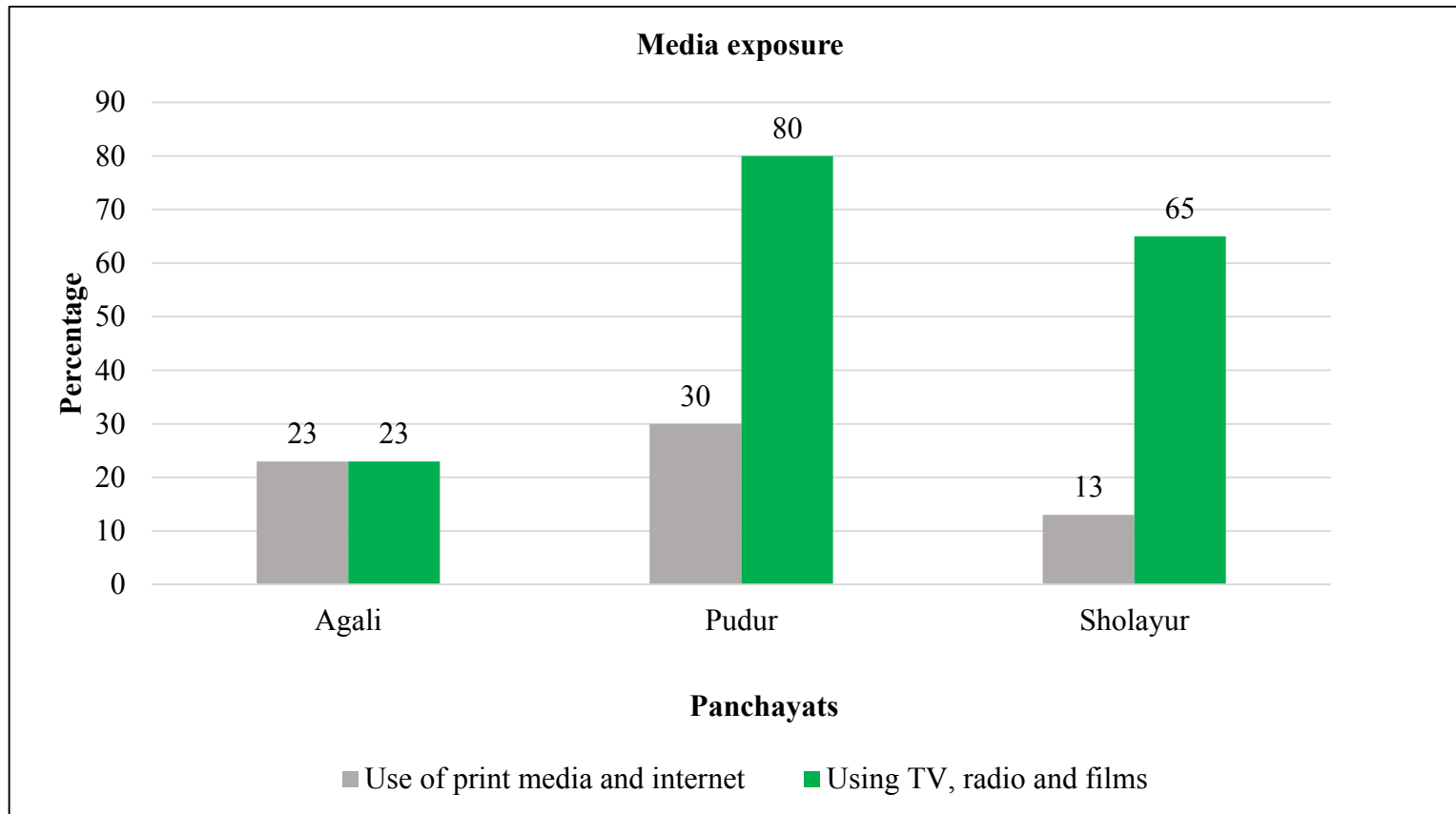


Figure 11. Distribution of tribal women based on media exposure

4.5.8 Monthly income

Table 14. Distribution of tribal women based on their monthly income N=120

Sl. No.	Category (Rs.)	Agali		Pudur		Sholayur		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	≤3000	4	10	0	0	1	3	5	4
2	3001-6000	5	12	14	35	12	30	31	26
3	6001-9000	23	58	25	62	22	55	70	58
4	9001-12000	7	17	0	0	3	7	10	9
5	12001-15000	1	3	1	3	2	5	4	3
	Total	40	100	40	100	40	100	120	100

Critical analysis of the table 14 gives us a clear idea about the variation of monthly income among the respondents. Only 4 per cent had monthly income below Rs.3000, 26 per cent with an income in between Rs.3001-6000, the majority 58 per cent with Rs.6001-9000 as their monthly income. Remaining 9 per cent of the tribespeople were having an income of range 9001-12000 and 3 per cent with Rs.12001-15000 as their monthly income.

Majority of them owns their agricultural lands, but cultivation of crops had become more risky due to the unavailability of irrigation water as well as the random wild animal attacks to the crops. This situation instigated them to withdraw from agriculture. Majority of the respondents find their income by working in nearby estates on a daily wage basis.

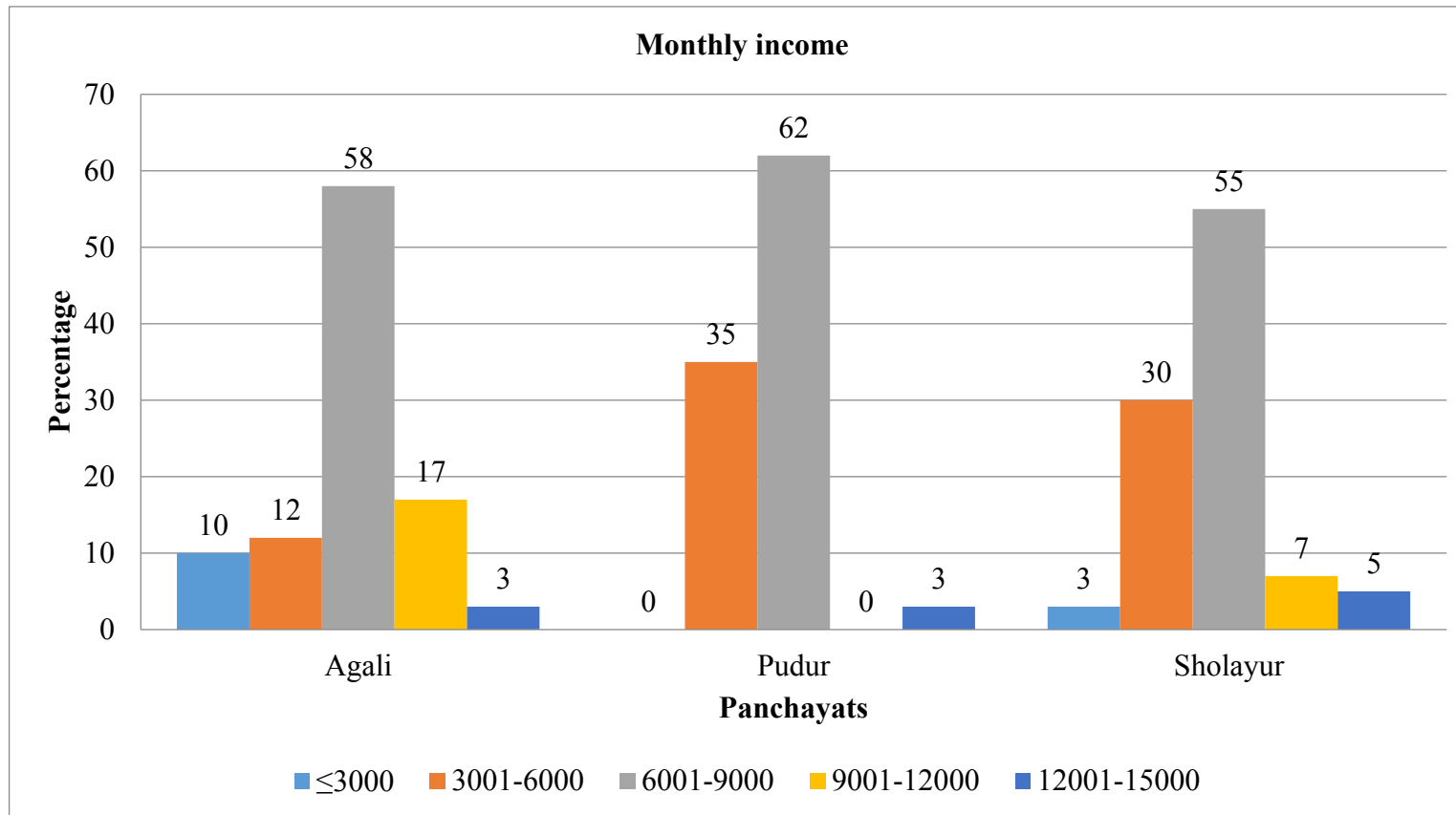


Figure 12. Distribution of tribal women based on monthly income

4.5.9 Body Mass Index (BMI)

Table 15. Distribution of tribal women based on their Body Mass Index N=120

Sl. No	Category	Score range	Agali		Pudur		Sholayur		Total	
			Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Severely underweight	≤16	1	2.5	0	0	7	17	8	7
2	Under weight	16-18.5	18	45	5	12	14	35	37	30
3	Optimal weight	18.5-25	20	50	35	88	19	48	74	62
4	Over weight	25-30	1	2.5	0	0	0	0	1	1
5	Obese class I	30-35	-	-	-	-	-	-	-	-
6	Obese class II	35-40	-	-	-	-	-	-	-	-
7	Obese class III	>40	-	-	-	-	-	-	-	-
Total			40	100	40	100	40	100	120	100

A perusal of table 15 shows the physical health of the respondents in terms of BMI (Body Mass Index). It could be seen that only 7 percent of them were coming under severely underweight, 30 per cent of them were under weight, the majority 62 per cent of them were with optimal weight and last the remaining one per cent were overweight. While coming to the panchayat wise analysis it could be seen that in Agali, 2.5 per cent were belonged to severely underweight and overweight category, 45 per cent of them were underweight and 50 per cent of them were with optimal weight. In Pudur only 12 per cent of them were under weight and the remaining 88 per cent of them were with optimal weight. Coming to the last Sholayur panchayat the majority (62 per cent) of them was with optimal weight, 30 per cent of them were under weight, seven per cent were severely underweight and the remaining one per cent was overweight category.

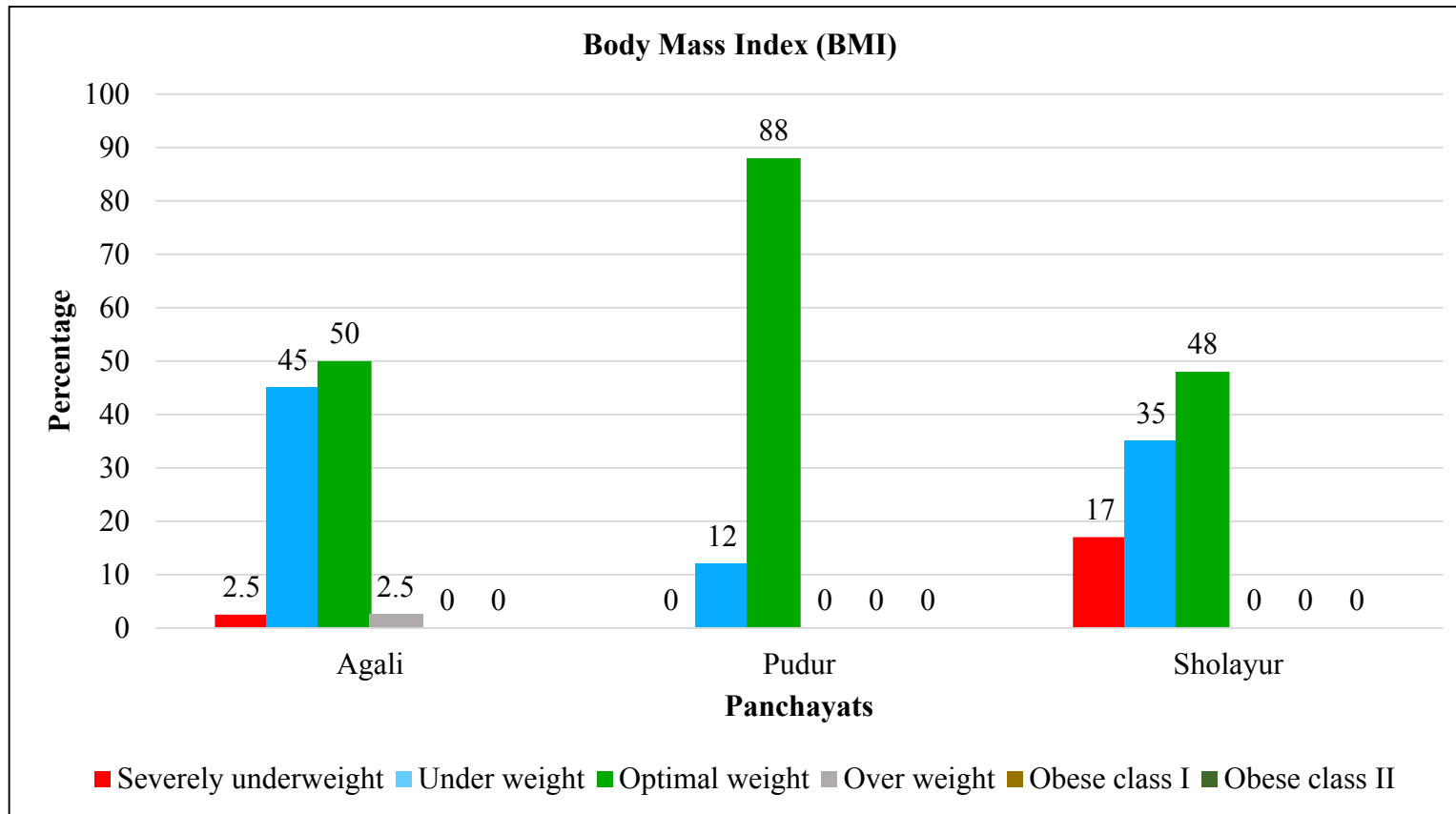


Figure 13. Distribution of tribal women based on Body Mass Index

4.5.10 Indebtedness

Table 16. Distribution of tribal women according to their indebtedness N=120

Sl. No.	Category	Agali		Pudur		Sholayur	
		Frequency	%	Frequency	%	Frequency	%
1	With indebtedness	0	0	0	0	0	0

From the table 16, it is clear that the tribespeople were devoid of any kind of indebtedness. They were contented with the income they obtained as they didn't have much expenditure for living and were always ready adjust with what they had.

4.5.11 Access to safe drinking water (distance)

Table 17. Distribution of tribal women according to their access to safe drinking water

N=120

Sl. No.	Category	Agali		Pudur		Sholayur		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	House premises	12	30	37	93	31	78	80	67
2	Up to 500m	7	18	0	0	9	22	16	13
3	500-1km	21	52	3	7	0	0	24	20

It is evident from the table 17 that there is discernible difference in the case of access to safe drinking water among the three panchayats. In the Agali panchayat among the 40 respondents only 12 of them were having access to safe drinking water in their house premises that is only 30 per cents. Eighteen per cent of them had

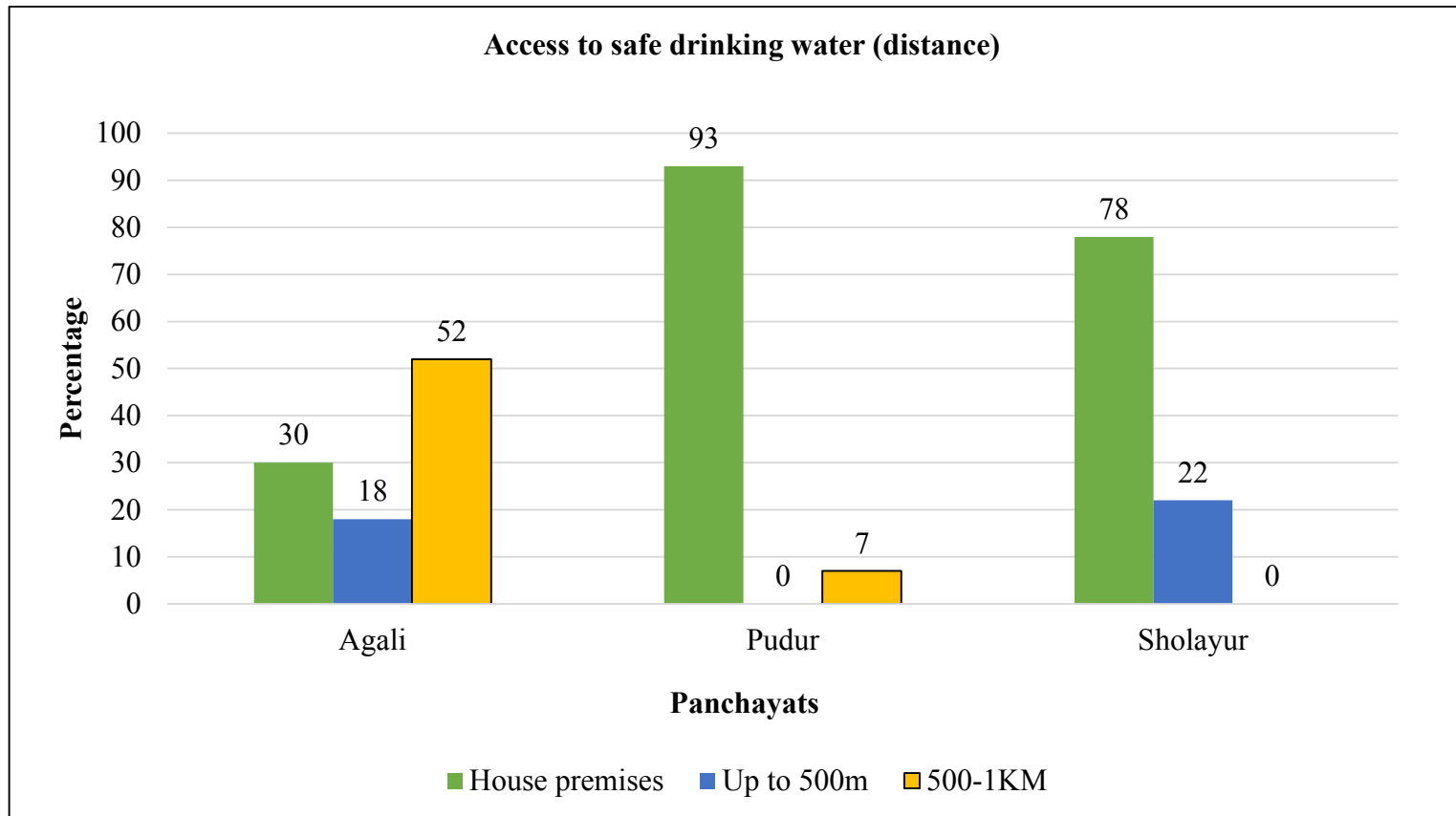


Figure 14. Distribution of tribal women based on their access to safe drinking water

accessibility to safe drinking water up to 500 m and the rest 52 per cents of the respondents had accessibility within 500 m to 1km distance. In the case of Pudur panchayat circumstances are entirely different. Here 93 per cents of the total respondents were having access to safe drinking water in their house premises itself and the rest of the 7.5 per cent were having accessibility within 500 m-1 km. In Sholayur panchayat also majority were having access in their house premises itself, which is 78 per cents and the rest 22 per cent had accessibility within 500 m.

Examining the whole data, it is seen that the majority of respondents had access to safe drinking water in their house premises itself, which comprised of 67 per cent of the total respondents, 13 per cent were having access within 500 m and the rest 20 per cent had to travel 500 m to 1 km to fetch safe drinking water.

The condition is far better than the previous years. Jananidhi project was comparatively successful in bringing safe drinking water to their house premises. Still the minority who belongs to deep inner forest and the hilly range are facing the inadequacy of safe drinking water in a reachable distance.

4.5.12 Electricity connectivity

Table 18. Distribution of tribal women based on home electrical connectivity N=120

Sl. No	Category	Agali		Pudur		Sholayur		TOTAL	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	With electricity connectivity	9	23	29	73	31	78	69	58
2	Without electricity	31	77	11	27	9	22	51	42
	Total	40	100	40	100	40	100	120	100

From the table 18 it is clearly visible that among the total respondents 58 per cent had electricity in their houses. While analyzing each panchayat separately, it is

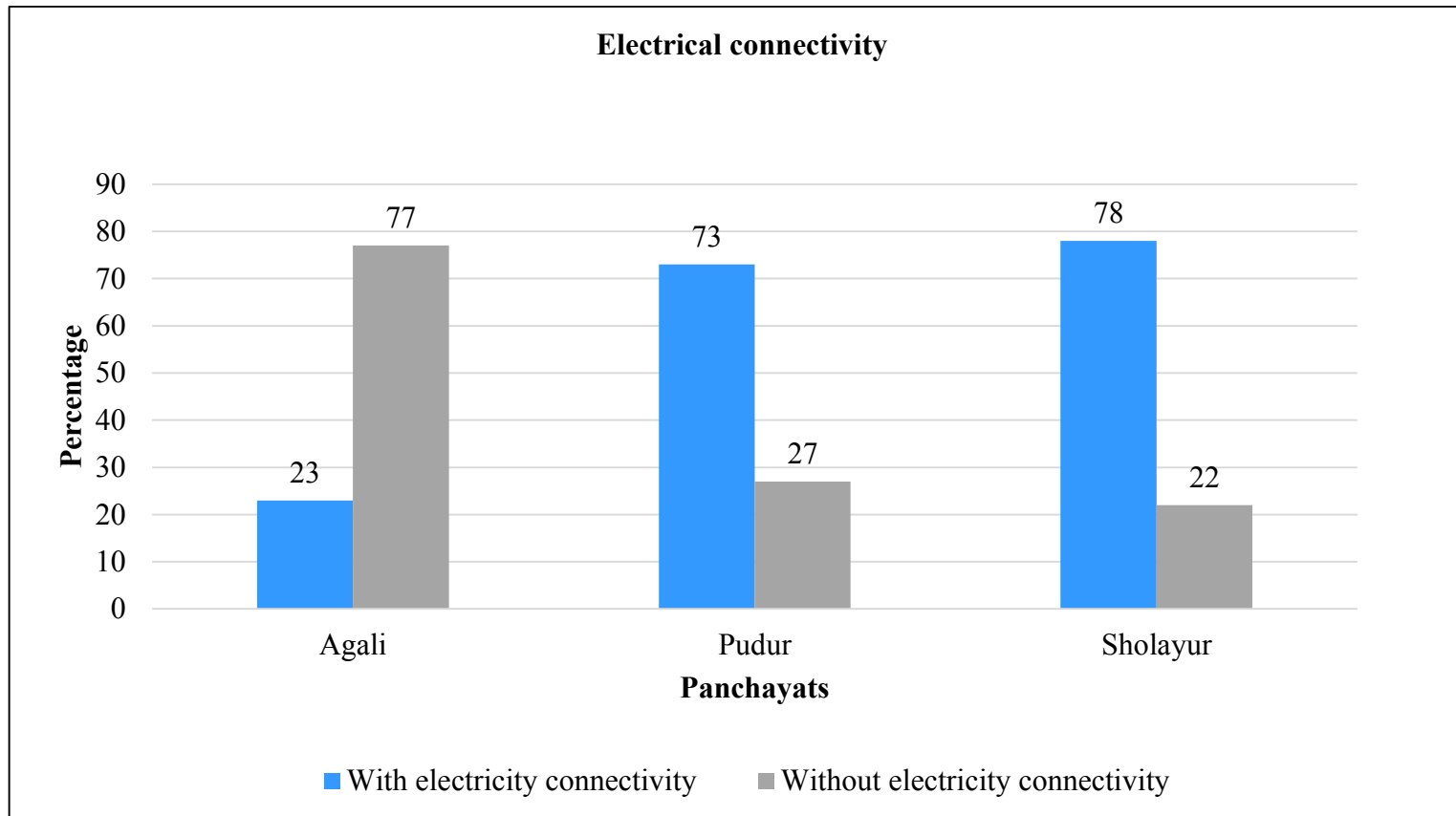


Figure 15. Distribution of tribal women based on electrical connectivity in their home

observable that in the Agali panchayat only 23 per cent of the respondents had electricity; in Pudur 73 per cent and lastly 78 per cent of the respondents had electricity connectivity in Sholayur panchayat. Developmental projects of the state government had brought in substantial changes during the past few decades. Despite these changes more realistic and innovative programmes should be designed and implemented in Attappadi for the holistic development of the area.

4.5.13 Latrine facility

Table 19. Distribution of tribal women based on latrine facility at their houses N=120

Sl. No	Category	Agali		Pudur		Sholayur		TOTAL	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	With latrine facility	1	2	15	37	17	42	33	27
2	Without latrine facility	39	98	25	63	23	58	87	73
	Total	40	100	40	100	40	100	120	100

The table 19 provides a pathetic picture of Attappadi tribespeople to the mainstream society. Their knowledge as well as consciousness towards sanitation is very less. Among the total respondents only 27 per cents had toilet facility in their house. The rest 73 per cent still uses open forest area for their needs.

In Agali panchayat only one respondent had toilet facility in their house. In Pudur panchayat 37 per cents of the 40 respondents had toilet facility in their own houses. Coming to the Sholayur panchayat condition was not different. More than half of the total respondents *ie.*, 58 per cent did not have toilet facility. Even in developed state like Kerala, a large majority of the tribespeople are living without

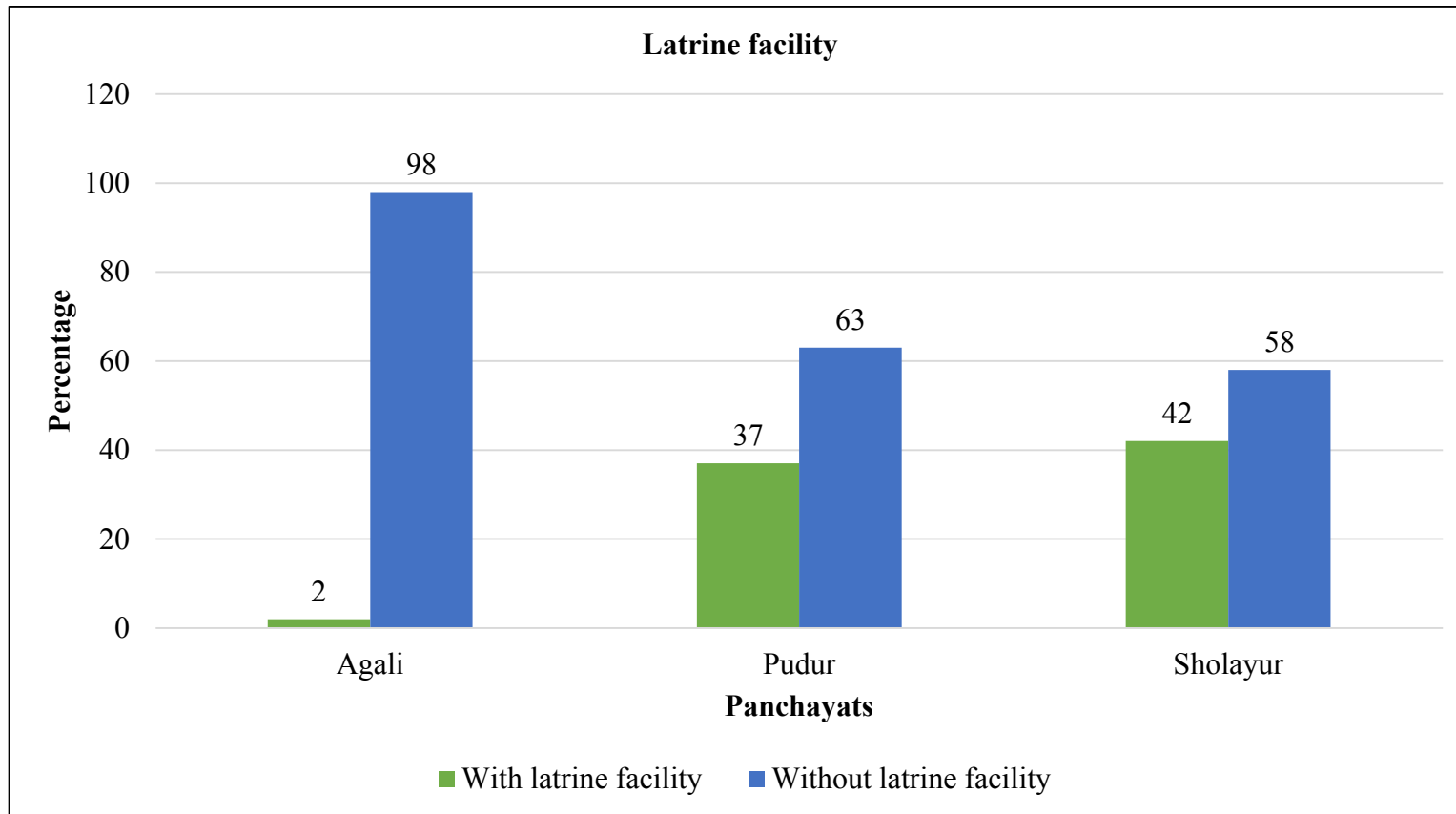


Figure 16. Distribution of tribal women based on latrine facility in their home

latrine facility. This condition should be changed by the introduction of new developmental interventions in this area by the government.

4.6 Canonical correlation analysis explaining the livelihood issues of tribal women

The livelihood status of tribal women was analysed in terms of their perception of freedom from insecurity and poverty as well as social participation. The performance of the dependent variables is expected to be influenced by some selected profile characteristics of the tribal women as independent variables. In order to analyse the effect of independent variables and the dependent variables on the livelihood status canonical correlation analysis was performed. Canonical correlation deals with the correlation between a pair of linear combination of set of dependent variables and independent variables namely canonical variables. The number of pairs of canonical variables is exactly the least number of variables either in the dependent set or in the independent set. This analysis transforms the original X vector and Y vector to pairs of canonical composites and their canonical correlation and its test of significance.

Table 20

List of independent variables with dependent variables for Canonical Correlations

Survey Variables

Independent variables (X)	Dependent variables (Y)
1.Age (X ₁)	1.Perception of freedom from insecurity (Y ₁)
2.Educational status (X ₂)	2.Perception of freedom from poverty (Y ₂)
3.Family size (X ₃)	3.Social participation (Y ₃)
4.Alcoholism (X ₄)	
5.Environmental orientation (X ₅)	
6.Political orientation (X ₆)	
7.Media exposure (X ₇)	
8.Monthly income (X ₈)	
9.Body Mass Index (X ₉)	

Canonical Analysis Elements

canonical

Composite of Dependent Variables	Correlation	Composite of Independent Variables
<i>Dependent canonical variate</i>	<i>R_c</i>	<i>Independent canonical variate</i>

Three pairs of canonical variates were estimated for providing canonical weights and loadings with canonical correlations 0.45, 0.39, and 0.17 respectively (Table 21) and its test of significance based on Wilks' lambda was found to be statistically significant (Table 21) at 0.01 level.

The standardised coefficients explains the weights of each variable on its canonical variate of X and Y and canonical loading provides the correlation of observed variate on its canonical variates which are helpful in identifying the most independent variables and dependent variables to address the livelihood issues of tribal women.

The results of canonical correlation analysis presented in the table 20 suggest that there were three canonical correlations between three pairs of linear combinations of independent variables (vector X) and dependent variables (vector Y). The estimated canonical correlation were respectively 0.45 and 0.39 and 0.17 and its tests of significance suggest that the first canonical correlation was significant at 1 per cent level and second canonical correlation was significant at 12 per cent level and third was not significant.

The independent variables educational status (0.54), political orientation (0.53) and alcoholism (0.61) had high estimated standardised coefficients on first canonical variate, while media exposure (0.90), age (0.50) and had high estimated coefficient on second canonical variate. The canonical loadings of variables media exposure (0.53), age (-0.44) were also high. But the variable age contributing negatively to its canonical variate. Based on first canonical variate with a communality 38 per cent and 31 per cent respectively for media exposure and age. The canonical loadings of all these were also high for age, educational status, political orientation, media exposure and alcoholism with loadings -0.44, 0.61, 0.44, 0.30 and 0.39 respectively.

Table 22 provides the canonical weights and canonical loadings for the dependent and independent variables on their canonical variates. The estimated standardized coefficients (canonical weights) based on first canonical function for Y_1 , Y_2 and Y_3 were respectively 0.12, 0.76 and 0.50 suggest that Y_2 and Y_3 had high weights on its canonical variate. The canonical loading of these variables on first canonical variate also confirms that perception of freedom from poverty (Y_2) and social participation (Y_3) were the most important dependent variables with a communality of 99 per cent and 89 per cent to explain the livelihood issues of tribal women.

In the study it was clearly seen that the score for the variable perception of freedom from poverty of tribal women was very high. It means that awareness about

their actual living conditions is very low. It was observed that most of them were guided by the pleasure principle and lack of thrift proneness as their way of life. They were satisfied with whatever they had, in every aspects of life like food, clothing and shelter. They were not at all aware of opportunities and possibilities of leading a standard of life, desired by the mainstream society. For them the importance of nutrient rich diet for a sustainable health life, a better housing for safe and comfortable life, a better standard of living etc., were not important and relevant. Even if they had one meal a day, they seem satisfied without any complaint. Their philosophy of life seems to be “living in the present and not concerned much about the future”, it makes the situation worse that until the moment when they became aware about their development needs it could not be converted properly into felt or perceived needs by tribespeople. Which is important for sustainable development of them. Thus it becomes the major hurdle for the extension functionaries and social activists to make them aware about their real situation they are going through.

Social participation also played a significant role in the livelihood status of the tribal women. It is in line with the findings of Ramakrishnan (1993), for him sustainable development aims at sustainable livelihoods for the weaker and vulnerable sections of the society. He also emphasized the need for efficiency in resources with equity and social justice. This implies strong community participation. That is for securing necessities of life social participation is indeed. It again comes to the duty of extension functionaries as well as social activists to make the tribal women more active in the social activities. The total development of a community is directly related to the participation of all the members in every developmental activities. Introduction of Kudumbasree, Thaikkulasangham like group activities among them brought significant changes in some of the members of the groups rapidly. Furthermore follow up activities are needed for influencing the other members of the community. First and important task of the extension functionaries

and social activists is to make convince them that all these group activities are for their development and sustainability.

Educational status of each individual also contributes something more to the livelihood status of a particular community. To establish a better livelihood status for a community, it is necessary that, there should be enough facilities available for them for education. People who all having exposure to different mass media would be supposed to have a better knowledge about the things happening in and around their society. This might also leads to a better livelihood status of the members of the society. By improving the educational status, simultaneously increase rate of media exposure finally resulting to a better livelihood status.

Results of canonical correlation emphasize that the livelihood issues of tribal women were more influenced by their perception of freedom from poverty and social participation along with a set of profile characteristics of tribal women such as educational status, political orientation, alcoholism, age and media exposure.

Table 21
Canonical Correlation Analysis
Measures of Overall Model Fit for Canonical Correlation Analysis

Canonical Function	Canonical Correlation	Canonical R2	F Statistic	Probability
1	0.4556	0.207	1.8	0.006
2	0.3960	0.156	1.4	0.12
3	0.1724	0.029	0.48	0.84

Multivariate Tests of Significance

Statistic	df1	df2	F	Prob>F	
Wilks' lambda	.648349	27	316.058	1.873	0.0064 a
Pillai's trace	.394053	27	330	1.8482	0.0073 a
Lawley-Hotelling trace	.478472	27	320	1.8903	0.0057 a
Roy's largest root	.26189	9	110	3.2009	0.0018 u

e = exact, a = approximate, u = upper bound on F

Table 22
Canonical solution for livelihood of tribal women for Functions 1 and 2

Variable	Function 1			Function 2			
	Coef	r _s (loading)	r _s ² (%)	Coef	r _s (loading)	r _s ² (%)	h ² (%)
Perception of freedom from insecurity	0.12	-0.04	20.10	-0.36	-0.61	36.68	56.78
Perception of freedom from poverty	0.76	0.85	73.27	0.60	0.51	26.12	99.39
Social participation	0.50	0.71	50.52	-0.75	-0.62	38.83	89.35
Age	-0.28	-0.44	19.90	0.50	0.33	11.13	31.03
Family size	-0.12	-0.10	1.12	0.09	-0.15	2.38	3.50
Educational status	0.54	0.61	37.74	-0.51	-0.18	31.68	69.42
Environmental orientation	0.19	0.19	3.93	0.15	0.32	10.32	14.25
Political orientation	0.53	0.44	19.59	0.35	0.25	6.48	26.07
Media exposure	-0.01	0.30	9.39	0.90	0.53	28.37	37.76
Body Mass Index	0.27	0.03	0.11	-0.26	-0.25	6.22	6.33
Monthly income	0.06	-0.03	0.09	-0.40	-0.16	2.52	2.61
Alcoholism	0.61	0.39	15.68	0.16	0.09	0.82	16.5

SUMMARY

5. SUMMARY

The tribal people have been confined to low social status and are often physically and socially isolated instead of being absorbed in the mainstream population. Psychologically, the tribespeople often experience passive indifference that may take the form of exclusion from educational opportunities, social participation, and access to their own land. All tribal communities are not alike. They are products of different historical and social transformations. They belong to different racial stocks and speak different dialects. The celebrated Kerala model of development had not made much change for the socio-economic life of this marginalized section of Kerala. Extreme levels of poverty, deprivation and vulnerability, high levels of exclusion, both developmental and social, extremely low levels of empowerment (political, social and economic), rapid marginalization due to unfair, dispossession, unequal and exploitative relations of production, and exchange between tribal communities and others. Tribal people population represents one of the most economically impoverished and marginalized groups in India.

Attappadi region is a showcase for the most vibrant and yet conflicting social and cultural ethos. Once only tribals inhabited, but now Attappadi has become the recipient of waves of migration from the plains of East and West, which eventually made the tribes a minority, constituting less than half of the total population. The tribal population belongs to the *Irula*, *Muduga* and *Kurumba* community. The main objective of livelihood analysis is to understand and describe the means of living of people particularly the deprived classes of rural society. Identifying and prioritizing livelihood issues are an important pre-requisite for designing a development strategy for the empowerment and emancipation of this most marginalized section of the society. The prioritized list of livelihood issues would provide an insight for the planners and administrators in focusing key result areas while formulating policies and programme. As a development tool livelihood analysis offers intensive method

of capturing the story of how villagers survive. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain and improve its capabilities and assets while not undermining the natural resource base. Livelihood analysis can be very useful for showing how an intervention fits with the livelihood strategies such as agricultural intensification/ extensification, livelihood diversification and migration etc. and how people's livelihoods are being enhanced or constrained.

Detailed review of literature, discussions with experts and scientists in agricultural extension were relied upon for the selection of variables. Perception of freedom from insecurity, perception of freedom from poverty and social participation were selected as dependent variables for the study. The profile characteristics of the respondents were the independent variables. The data were collected using pre-tested and structured interview schedule. The statistical tools used were frequency, simple per cent analysis and canonical correlation analysis.

The salient findings are summarised below:

1. From the study it is evident that alcoholism, wild animal menace in agricultural lands, land alienation, addiction to narcotics, depletion of natural resources like forest and water bodies, inadequate transport facilities, inadequate educational facilities, inadequate medical facilities, social exclusion and discrimination etc. are the major livelihood issues of tribal women as perceived by them.
2. Perception of freedom poverty was found to be high among the respondents. In Agali panchayat 72 per cent, in Pudur 92 per cent and Sholayur 100 per cent of the respondents were having a high level of perception of freedom from poverty.
3. Perception of freedom from insecurity of tribespeople was very high. In the panchayat wise analysis it was seen that Agali (90%) and Sholayur panchayat

(92%) respondents had high level of perception of freedom from insecurity and in Pudur 15 per cent of them had low level of perception of freedom from insecurity.

4. Social participation of the tribal women of Attappadi area found to be low. That is 68 per cent were having a low level of social participation. In the panchayat wise analysis, in the case of Agali 90 per cent, in Pudur 65 per cent and at Sholayur 50 per cent of them having low level of social participation.
5. Majority of the total tribal women belonged to middle age that is 66 per cent. Only 15 per cent came under old age category and the remaining 19 per cent belonged into young category.
6. With regard to educational status 80 per cent of the tribal women were illiterate, 1 per cent had obtained primary education, 13 per cent, five per cent and two per cent respondents obtained education at middle school, higher secondary and collegiate level respectively.
7. With regard to family size majority of the family were with 3 to 5 members.
8. About their alcoholism 33 per cent were found to be using alcohol.
9. Political orientation of the Attappadi tribal women were seen that 63 per cent showed a higher level of political orientation and the remaining 37 per cent showed a lower level of political orientation.
10. About tribal women's environmental orientation, 87 per cent of the respondents had a high level of environmental orientation.
11. With regard to media exposure, only 22 per cent of the total respondents were using either print media or internet while 56 per cent of them were using TV, radio and films for media exposure.
12. About their monthly income only 4 per cent had monthly income below Rs.3000, 26% with an income in between Rs.3001-6000, the majority 58 per cent with Rs.6001-9000 as their monthly income. Remaining 9 per cent with 9001-12000 and 3 per cent with Rs.12001-15000 as their monthly income.

13. With regard to their health status, 7 per cent of them were coming under severely underweight, 30 per cent of them were underweight, the majority 62 per cent of them were with optimal weight and last the remaining one per cent were overweight.
14. With respect to their indebtedness none of the respondents were having no indebtedness.
15. With regard to access to safe drinking water (distance), majority of the tribal women had access to safe drinking water in their house premises itself, it includes 67 per cents. 13 per cents were having access within 500 m and the rest 20 per cent had to travel 500 m to 1km to fetch safe drinking water.
16. With respect to electrical connectivity at houses, among the total tribal women surveyed 58 per cent had electricity in their houses.
17. Among the tribal women only 27 per cents had toilet facility in their house.
18. The standardised coefficients (canonical weights) for canonical function 1, all the dependent variables were 0.12, 0.76 and 0.50 for perception of freedom from insecurity, perception of freedom from poverty and social participation respectively.
19. The estimated canonical correlation were respectively 0.45 and 0.39 and its tests of significance suggest that the first canonical correlation was significant at one per cent level and second canonical correlation was significant at 12 per cent level.
20. The independent variables educational status (0.54), political orientation (0.53) and alcoholism (0.61) had high estimated standardised coefficients on first canonical variate, while media exposure (0.90), age (0.50) and had high estimated coefficient on second canonical variate. The canonical loadings of variables media exposure (0.53), age (-0.44) were also high. But the variable age contributing negatively to its canonical variate.



Plate 3. One Tribal hamlet at sholayur



Plate 4. Kurumba tribal woman of pudur panchayat



Plate 5. Direct interview with tribal woman



Plate 6. Pepper farmers of Sholayur panchayat

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**ANALYSIS OF LIVELIHOOD ISSUES OF TRIBAL WOMEN:
THE CASE OF PALAKKAD DISTRICT**

by

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ABSTRACT

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2015

ABSTRACT

This study entitled “Analysis of livelihood issues of tribal women: The case of Palakkad district” was conducted at three gramapanchayats of Attappadi tribal development block covering 120 respondents with 40 respondents from each panchayat. The study examined in detail the livelihood issues of tribal women and their perception of freedom from poverty and insecurity. Tribal women’s scale of social participation and profile characteristics were also studied.

The important livelihood issues of tribal women as perceived by the them were alcoholism, wild animal menace in agricultural lands, land alienation, addiction to narcotics, depletion of natural resources like forest and water bodies, inadequate transport facilities, inadequate educational facilities, inadequate medical facilities, social exclusion and discrimination etc.

Tribal women’s perception of freedom from insecurity was found to be very high. Eighty nine per cent of the total respondents showed high level of perception of freedom from insecurity. The perception of freedom from poverty was also found to be high among the respondents. Eighty eight per cent showed high level of freedom from poverty. But still the level of social participation was very low (68 per cent) among the tribal women.

In the case of profile characteristics of the tribal women, majority of them belonged to middle age (66 per cent), 15 per cent came under old age category and the remaining 19 per cent in the young category. Regarding the variable ‘monthly income’ 58 per cent of the respondents had an income ranging between Rs. 6000 - 9000, nine per cent with Rs. 9000 -12000 and only three per cent came under the range of Rs. 12000 -15000. With regard to educational status 80 per cent of the tribal women were illiterate and one per cent had obtained the basic primary education only.

Thirteen per cent of them had gone till middle school, four per cent had undergone higher secondary and two per cent of them had obtained collegiate level education. Media had also played a significant role in their livelihood as 22 per cent of the tribal women were using either print media or internet while 56 per cent of them were depending on audio-visual aids like TV, radio etc. Sixty seven per cent of the tribal women had high political orientation and 87 per cent of them had high environmental orientation. Regarding the health status in terms of BMI (Body Mass Index) 37 per cent of the respondents were in the underweight category. Among tribal women, a sizeable section (33%) consumes alcohol.

Results of canonical correlation analysis suggests that the perception of freedom from poverty and social participation were the two important dependent variables and educational status, political orientation, alcoholism, age and media exposure were the major independent variables to explain the livelihood issues of tribal women.

From the findings it could be concluded that the major livelihood issues faced by the tribal women were poverty, alcoholism, inadequacy of food as per nutritional requirements, wild animal menace in agricultural lands, lack of electricity connectivity, and addiction to narcotics. It was found that the perception of freedom from insecurity and freedom from poverty of tribal women were very high and the level of social participation was found to be low.

APPENDIX

INTERVIEW SCHEDULE

Livelihood issue analysis of tribal women: The case of Palakkad district

Respondent No:

1. Name of the respondent :
2. Address :
- (a) House No :
- (b) Name of the hamlet
- (c) Name of the village
- (d) Name of the panchayath
2. Age:-----years
4. (a) Religion :
- (b) Name of the tribe
- (c) Sub tribe if any
5. Land size (Farm size) :-----cents
6. Information about members in the family

Sl No:	Relationship with the respondent	Age

7. Educational status

Sl.No.	Level of education	
1.	Illiterate	
2.	Primary level	
3.	Middle school	
4.	Higher Secondary	
5.	Collegiate	

8. Access to safe drinking water (distance)

Sl. No.	Distance from home to the source	Source(Specify)
1	House premises	
2	Upto 500m	
3	500m-1Km	
4	1-2Km	
5	2-4Km	
6	>4km	

9. Do you have latrines in your house? Yes/ No

10. Do you have electricity in your house? Yes/ No

If No what type of light do you use?

- (a) Candle
- (b) Kerosene lamp
- (c) Others

11. Details regarding the availability of fuel

Type of fuel used in the house

Sl No:	Type	
1	Wood	
2	Agricultural waste	
3	Cow dung	
4	Others	

Source of fuel for the family

Sl No:	Source	
1	Collected from the house premises	
2	Collected from non-forest areas in the village	
3	Collected from forest	
4	Purchased	
5	Others	

12. Income per month

Amount in Rs.-----

13. Indebtedness

Amount in Rs : _____

14. Mass media exposure

Source	Frequency		
	Regularly	Occasionally	Never
News paper			
Radio			
Television			
Films			
Magazines			
Internet			

15. Environmental orientation

Sl.No	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Man is exploiting the earth too much					
2	Man has to be greatly concerned about environmental issues like deforestation.					
3	There is truth in what environmental activists claim and we should lend our support to them					
4	Do you agree that older methods of farming were more safer than present					
5	Intensive agricultural practices Intensive agricultural practices cause environmental hazards.					

16. Alcoholism

- Do you consume alcohol? Yes/ No
- Frequency of intake

Category	
Daily	
more than once in a week	
Weekly	
Monthly	
occasionally	

17. Political orientation

Sl No:	Items	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Recognizing power relations existing in the society is very important in resolving the problems of the society.					
2	Democracy is the best political principle and philosophy for ideal governance					
3	Individual approach will not help in solving problems					
4	Organizing people for asserting their genuine and fundamental rights is an important pre-requisite for a democratic society.					
5	Political parties are inevitable and indispensable for a vibrant democratic society functioning in accordance with constitution.					
6	Sustainable progress and welfare of people can be achieved only through organized political and social interventions					
7	A political approach to social issues actually preserve the existing power relations and prevent distributive justice, social transformation and progress					
8	Political parties and other social organisations play no role in social development and therefore it is a curse to the society					

9	Principles like freedom, equality and fraternity should be the guiding cardinal principles of a strong civil society.					
10	Distributive justice makes a social system humane and modern.					

18. Anthropometric measurements:

Particulars	kg/cm
Weight for age	
Height for age	

19. Perception of freedom from poverty

Sl. No.	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	I understand that I have adequate purchasing power for buying essential food items.					
2.	I perceive that all the food items I purchase for everyday consumption are adequate with essential nutrients and minerals.					
3.	I am capable of purchasing food items with essential minerals and nutrients for my children.					
4.	I can purchase food items according to my preference.					
5.	Throughout the year I don't find any problem in finding employment for meeting my livelihood requirements.					

6.	I own/ I can construct a house to look after my family from adverse and climatic conditions.					
7.	I believe that I have adequate money for purchasing essential clothes for me and for my family members.					
8.	I believe that I have adequate money for purchasing school uniform and other study materials for children who are studying.					
9.	I am able to take my family members for reasonable medical treatment while illness.					
10.	I can afford to go to private hospital for treatment.					
11.	I have sufficient money to purchase essential medicine for my family members.					
12.	I am capable of sending my children to the educational facilities available for the primary education.					
13.	I am capable of sending my children to the educational facilities available for the higher education.					
14.	I don't usually face indebtedness to meet my livelihood needs.					
15.	Unemployment during rainy season adversely affects my income and my ability to look after requirements of my family.					
16.	I have savings to meet contingencies with regard to emergency needs related to my family.					

20. Perception of freedom from insecurity

Sl no	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	I don't generally encounter any problem regarding security while travelling alone being a woman.					
2.	I am sure that I don't face any type of discrimination and social exclusion at the work place being a tribal woman.					
3.	I don't face any type of sexual exploitation.					
4.	I am afraid of the security of my children at home while I am away from home.					
5.	I am facing discrimination in wage being a tribal woman.					
6.	I am regularly subjected to physical and mental assaults by husband and other relatives.					
7.	I am facing financial inadequacy to run the family owing to alcoholism and other extravagant lifestyle of my husband.					
8.	I have freedom to express my own opinions and to have a role in decision making.					
9.	I feel that I have freedom and right for choices and priorities regarding family matters.					
10.	I am regularly facing verbal and physical assault by non-tribal employers and others.					
11.	I don't have adequate money to look after my health owing to the unemployment and financial difficulty.					
12.	I am constrained to work despite, ill health and other physical					

	difficulty.					
13.	There is less or no access to health care facilities.					
14.	I feel that I am facing socio-economic deprivation, social discrimination and social exclusion.					
15.	My views and opinions are less considered and valued consequent to my racial and gender identity.					
16.	I am facing exploitation of different sorts as my level of social exposure and experience is less.					

21. Social participation

1.	Time spent for social activities
	<ul style="list-style-type: none"> On an average how much time do you spend for social activities (In hrs.)?
2.	Leadership competency
	Where will you place yourself in the leadership continuum with regard to your leadership attributes? Very low low medium high very high 1 2 3 4 5
	How do you utilize your level of competency of leadership in the welfare of society? Most often often seldom rare very rare 5 4 3 2 1
3.	Prosocial behaviour (Prosocial behaviour can be operationally defined as involvement in desirable activities for the welfare of community and society)
	How frequently do you participate in social/community functions (marriage, funeral, festivals in temples, church etc.) Most often often seldom rare very rare 5 4 3 2 1
	Do you think you have the ability to understand the problem of others? Most often often seldom rare very rare

	5	4	3	2	1
	How often you intervene in resolving the problems of others?				
	Most often	often	seldom	rare	very rare
	5	4	3	2	1
4.	Involvement in public speaking skills				
	Where will you place yourself in the public communication skill continuum with regard to your public speaking skill?				
	Excellent	good	fair	poor	very poor
	5	4	3	2	1
	How often do you involve in public speaking?				
	Most often	often	seldom	rare	very rare
	5	4	3	2	1
5.	Interpersonal skills				
	Where will you place yourself in the interpersonal communication skill continuum with regard to your capability in interpersonal communication as well as you in making interpersonal relationships?				
	Excellent	good	fair	poor	very poor
	5	4	3	2	1