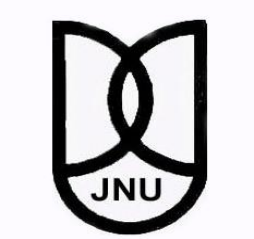
Socio-Economic Consequences of Malaria among Women: A Study among the Bodo Tribal Women of Chirang District of Assam

A Dissertation Submitted to Jawaharlal Nehru University in Partial fulfillment of the requirement for the award of the degree of

Master of Philosophy

By

Kuheli Das



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This dissertation entitled **"Socio-economic consequences of malaria among women: a study among the Bodo tribal women of Chirang District of Assam"** is submitted in partial fulfillment of the requirements for the award of the degree of Master of Philosophy, of Jawaharlal Nehru University. This dissertation has not been submitted for any other degree of this University or any other University and is my original work

Kuheli Das

We recommended that this dissertation be placed before the examiners for evaluation.

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Content

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Dedicated to my family and to all the respondents

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Abbreviations

API-Annual Parasitic Index

BNHP-Blue Nile Health Projects

BTAD-Bodo Territorial Autonomous Districts

DDC-Drug Distribution Centre

DDT- Dichlorodiphenyltrichloroethane

FTD-Fever Treatment Deport

IRS-Indoor Residual Spray

ITN -Insecticide Treated Net

LLIN-Long Lasting Insecticide Net

MPO-Modified Plan of Operation

NMCP-National Malaria Control Programme

NMEP-National Malaria Eradication Programme

NRHM-National Rural Health Mission

NVBDP- National Vector Born Disease Control Programme

PfCP- P.*falciparum* Containment Programme

SIDA-Swedish International Development Agency

SNA-System of National Account

UMS-Urban Malaria Scheme

WB-World Bank

WHO- World Health Organization

Chapter 1

Introduction and literature review

Health of an individual does not depend upon bio-medical factors only; rather there are host of factors that effect health status and even access to health services. Structural factors like class, gender does makes difference in the health status of an individually. Even in the Final Report of the WHO Commission on Social Determinates of Health (2007) states that gender along with economic inequality and caste works together to make women bear more burden. Thus recognition of the fact that health is socially produced requires that we understand how structures of stratification actually operate in people live and their linkage with health. As living in a society makes people experience social relation in day to day life, similarly gender relation is also experienced in day to day life. And this gender relation is manifested in our behaviors, practices and values that are imbibed within society. To fulfill the gender role expectations, women's experiences as a patient as well care giver differs from their male counterparts.

The study has been conducted in Assam that has highest number of malaria death among the northeastern states. (Ministry of Health and Family Welfare, govt. of India, Year)(A.1.4 and A.1.5) *Plasmodium falciparum* is the main characteristic of the malaria in the Northeastern region. Difficult terrain, hilly forests, inadequate infrastructure coupled with the development of chloroquine resistance *P. falciparum* in Assam is aggravating the situation. (Baruah 2007:149)

The present study tries to capture this differential experience of the Bodo Tribal women of Chirang district of Assam, in the back drop of malaria endemicity. The study recognizes that women are not a homogenous category and therefore it tries to find out who, among the women are most affected. The study also tries to focus on the factors that make these differential consequences.

This chapter is broadly divided into two sections. The first section deals with the malaria, its history and control measures adopted. While section two deals with review of

literature on women and gender division of labor and women's role as care giver, theoretical perspectives of women as care giver, women's role as care giver, gender division of labor in tribal society finally social consequences of malaria.

1.1History of Malaria

The word malaria is derived from Italian word meaning "bad air". The name Malaria is from miasma theory of causation, when it was though that malaria is caused due to bad air coming out of swamps. From Chinese to Sanskrit text mention of malaria could also be found in the ancient writings from different civilizations.

During the 17th century the treatment of the fever with symptoms suggestive of malaria, was the bark from the tree which was then called Peruvian bark and the medicine from the bark is now known as quinine. The medicinal aspect of Qinghao plant became quite familiar in China. By 1971, scientists were able to isolate the active ingredient of Qinghao plant- known as Artemisinin. (www.cdc.gov)

The parasite of malaria was the first observed by Charles Louis Alphonse Laveran a French army surgeon posted in Constantine, Algeria. The life cycle of plasmodium was first studied by Camillo Golgi, an Italian neurophysiologist. The two malaria parasites that affect humans were named *Plasmodium vivax* and *P. malariae* by Italian zoologist Giovanni Batista Grassi and Raimondo Filetti in the year 1890. However, it was Ronald Ross, who showed that malaria transmits from an infected patient to anopheles mosquito. For his discovery, Ross was awarded the Nobel Prize in 1902 (www.cdc.govt).

1.2Agent, Host and Environment factor in Malaria

Malaria in human being is basically caused by four species of malaria species- P.vivax, P.falciparum, P.malariae and P.ovale. Most cases in India are of P.vivax whereas P.falciparum cases are of most fatal (Park 2010:13).

The malaria parasite undergoes two cycles of development – sexual cycle and asexual cycle. The asexual cycle occurs when the infected mosquito bites the human being and

sporozoites enter human body. Inside the human body, it undergoes four phases – (i) HEPATIC PHASE: In this phase the sporozoites enter into liver cells and after development the sporozoites become hepatic schizonts, which bursts to release merozoites.(ii) ERYTHROCYTIC PHASE- In this phase the merozoite penetrates the RBC and after sunsiquesnt development, the merozoite is released which inturn penetrate fresh RBC.(iii) GAMETOGANY-In this stage male and female gametocytes are formed.

The sexual part of the development of malaria parasite occurs inside the mosquito. With the fertilization of female gamete the zygote is released in the stomach of the mosquito. It later on develops into oocysts, which grows into sporozoites. These sporozoites then migrate to the salivary gland of the mosquito, thus making the mosquito infectious (Park 2010: 110).

1.3 History of Malaria control with reference to Assam

Vector control in India dated back to 1901 when Royal Society of London in consultation with the military authorities conducted an experiment in Mian-mir, a cantonment near Lahor. The objective was to demonstrate the practicability of malaria control by minor and inexpensive methods suggested by Sir Ronald Ross.The work was started by Christophers and James in September 1901.Breeding was controlled in canals, irrigation channels, ponds, rainfall pits, surface drains and such other areas and this work was continued by Captain Christophers from July to November 1903.The first experiment proved a failure as it was not possible to destroy *Anopheles* mosquitoes by simple and inexpensive methods. From 1904 to 1909 more intensive work was done on the biology and control of mosquito breeding, but for various reasons, experiment on the control of malaria was again considered a failure. Therefore further research and development was stressed by Norton et al in 1910. (www.malariasite.com)

The malaria control strategies which started during pre independence period were mainly removal of breeding sites and use of chemical like larvicides paris green and kerosene. In the year 1920s similar larviciding and breeding pool removal operations

were conducted in the Tea plantation area of Assam by Rockefeller Foundation. Pyrethrum was extensively used in India on experimental basis by Rockefeller Foundation, which was later extended to Assam in the year 1942. It was first used in the tea plantations of Assam. However all these measures couldn't control malaria owing to the limited effectiveness of measures. (www.malariasite.com)

DDT (dichlorodiphenyltrichloroethane) was first introduced in India, soon after the Second World War in the year 1944-45 by the armed force for malaria control. Subsequent year it was made available for civilian use and in 1946, it was introduced in some states as a pilot project including Assam. In Assam it was introduced in 30 highly endemic areas, Tea gardens under Kamrup District, Sibsagar district, Nazira Coalfields and Margherita Coalfields. DDT spraying showed tremendous success. By 1948 several states exhibited impressive results of DDT spraying. (www.malariasite.com and www.nihfw.org)

Based on the above mentioned success, the government of India launched National Malaria Control Program (NMCP) in the year 1953. The main Strategies followed was Indoor Residual Spray (IRS) of human dwelling and cattle sheds where spleen rate was more than 10%.Malaria control teams were also constituted to conduct surveys and for monitoring the malaria incidence in control areas along with providing the anti malaria drugs to the patients reporting to any institutions. It was operational up to 1957. As a result of this program, number of malaria deaths decreased considerably. Encouraged by the success of National Malaria Control Program the 8th WHO assemble recommended to change the strategy to eradication. Following this the National Malaria Eradication Program (NMEP) was launched in the year 1958 to eradicate malaria in 7-9 years with 100 % central government support, which could be termed as the biggest vertical program. The strategies followed for this program was Indoor Residual Spray with DDT twice in a year in appropriate seasons and fortnight surveillance followed by radical treatment of all detected cases. The program was launched in four phases- preparatory, attack, consolidation, maintenance. (Park, K 2010)

However in 1965 the program suffered huge set back with reporting of resurgence of malaria. Even deaths by *pf* were also reported. One of the reasons for this outbreak was non inclusion of urban area in NMEP. Along with that there were other reasons as pointed out by Sen (1977:3) like sole dependence on DDT and it didn't gave due importance to other measures like improvement in drainage schemes, cultivation of larnivorous fish, change in agricultural pattern. Thirdly, emphasizing the importance of the mass campaign without giving due importance to the general health services. Although the importance of mass campaign can not be denied but in developing countries that are marked with resource crunches, allocation for resources for the mass campaign are done at the cost of general health services This general health services would not only cover the large population rather would tackle cases that continues beyond the interruption of transition.

So in 1971 Urban Malaria Scheme (UMS) was launched. The strategies of the scheme were vector control like source reduction, use of larvicides and larvivorous fish in water bodies, space spray, minor engineering, and implementation of laws by municipality. In short the main strategy for urban malaria scheme is anti larval and anti parasitic measures. None of the cities in Assam came under this scheme.(www.nvbdcp.gov.in and www.malariasite.com)

With the introduction of Modified plan of operation (1977) an era of integration with general health services was started. Separate strategies were made for areas reporting API 2 and more, and areas reporting API less than 2. DDT or BHC spray in areas reporting *pf* cases, active and passive surveillance of cases, decentralization of laboratory services to PHC, establishments of Drug Distribution of Centre (DDC).For the area reporting API less then 2 the main strategy followed was focal spray. In the year 1973 a new aspect of P*f* problem came into light, when P*f* resistant cases were reported from Assam. Later on a systematic study revealed that many other foci were present in the Northeastern States of India, Odisha, Madhya Pradesh, and Maharashtra. Following the report, in the year 1977 Swedish International Development Agency (SIDA) and WHO provided assistance for 18 districts of Northeast state that reported *Pf* deaths along

with Chloroquine resistance and a special component was added to Modified Plan of Operation (MPO) known as P.*falciparum* Containment Programme (PfCP). But the biggest strategy shift in the MPO was integrating it with general health services. Although MPO was quite successful in bringing down malaria deaths but many states reported malaria epidemics and Assam being one of them. Assam reported malaria epidemic during the year 1995. Following this epidemic, an expert committee was constituted that made some recommendation. Based on those recommendations Malaria Action Program was formulated in 1994. It was hundred percent central government sponsored for all the north eastern state along with other states like Andhra Pradesh, Odisha, Gujarat, Maharashtra and Rajasthan. Malaria Action Plan identified the high risk areas and divided them into different categories according to epidemiological parameter. Assam was placed into hardcore area (Tribal Areas). As the region reported Pf cases so the main priority was given on treating on Pf cases and providing alternative drug to chloroquine resistant areas through Fever Treatment Deport (FTD) and Drug Distribution Centre (DDC), using Multipurpose Worker (MPW) for case detection at the village level and referring them to PHC. Link workers were used caring blood samples to Fever Treatment Deport (FTD). (Park 2010:149)

The government took external support from World Bank (WB) for Enhanced Malaria Control Project in the year 1997.The project was up to the year 2005. Although the project was for 8 peninsula states and the tribal population residing there but the entire country benefited from these as it brought down the Pf cases significantly from. 71m in 1997 to. 51m in 2005(PIP: 5). The key strategies for this project is Early case detection and prompt treatment, Vector control by IRS where API is 2 or more per 1000 for the last three years, Health education and community participation, community participation, use of larvivorous fish.

In the year 1998 India adopted WHO-Roll Back Malaria and successfully bided for GFATM round IV (Global Fund for Aids TB and Malaria) for all the North Eastern States along with Odisha, West Bengal, Maharashtra. In the year 2004 malaria was integrated with National Vector Born Disease Control Programme (NVBDP).The

strategies followed under Roll Back Malaria were same as followed previously. The only addition was introduction of ITN (Insecticide Treated Net) as a prevention. NVBDC was made a part of National Rural Health Mission (NRHM) in the year 2005.(www.malariasite.com and Park2010 :150)

Presently GFATM ROUND IX is going on and the action plan adopted in Chirang district is of IRS however priority to be given to population residing in API >5 followed by population residing in areas reporting API 2-5, promotion and distribution of ITN, promotion of larvivorous fish, Public private partnership for training, EDPT, LLIN (Long Lasting Insecticide Net) distribution, IEC for community involvement.

The next section will try to see women's role as a Care-giver across societies and what impact do does it have on them.

1.4Review of literature

1.4.1 Gender division of labor Women's role as Care Giver

Men and women both perform work through out the world, but their job has been divided on the line of sex. This sexual division of labor has been a historical phenomenon. Thus sexual division of labor can be stated as "the process through which tasks are assigned on the basis of sex. This division of labor is one of the most fundamental ways that sex distinctions are expressed in social institutions." (Whatson 2005:82) There have been many explanations for this sexual division of labor. Some try to find the answer in the biology of women. Women's role as a reproducer and care giver of life is considered as a hindrance in her role as a producer. However this explanation has been challenged by the Mukhopadhyay and Higgins (1988) cited in DN and GK (1989). They argue that , it came out in the narrative of the women that they used to hunt irrespective of whether they were pregnant or lactating used to hunt. The restriction on women about hunting higher mammal is related to lack of access to weapon or hunting dogs rather then any natural limitation.

In hunting and gathering societies, men performed the role of hunters. However as mentioned above there is evidence that women were also involved in hunting. The restriction on women about hunting higher mammals is though related to lack of access to weapon or hunting dogs rather than any natural limitation. The sexual division of labor is not restricted to hunting and gathering societies and is prevalent in many tribal societies, where many women take active part in the agricultural process but they are prohibited from touching the plough. This sexual division of labor is much observed in Industrial societies also, where the men are seen as a bread winner and women are restricted to the domestic sphere. In the domestic sphere, the sexual division of labor is very strictly demarcated, where by the biological fact that only women can bear children, is often used to reinforce the sexual division of labor. Women are also assigned the role of care givers based on the notions associated with their sex. Taking care of the children and rearing them is the primary responsibility of the women. It is in family that women's labor is being appropriated. Women's labor is considered as a property. This gender division of labor gave raise to hierarchy, which is related to the ownership of the means of production. As Engels argues that women's subordinate position emerged as a result of monogamous marriage. Monogamous marriage came up as an attempt to protect private property, which was concentrated in the hands of men and his desire to pass on that wealth to his male heir. Thus women's sexuality was controlled to make sure about the paternity of the children. Women were being made economically dependent upon man. (Engels (1884) cited in Haralambos 2006)

Thus the sexual division of labor is not at all natural rather it is forced which acquired the form of social norm. This sexual division of labor is very much based on gender rather then sex. Even Antony Giddens in "Sexuality and gender" states that Patriarchy had its root in private property. With the establishment of private property, wealth and means of production got concentrated in some people's hand and that prevented women to participate in the economic activities. According to Walby (1991:4), women's work in the domestic sphere and her role as a care giver is appropriated by the husband. Her job as a housewives and a care giver to her families is absolutely for free, this unequal sexual division of labor is a phenomenon of the capitalist society.

This sexual division of labor gives rise to role expectation, which is known as "the doctrine of separate sphere" (Cancian cited in Wharton 2005). "This doctrine drew an association between the separation of home and work and the qualities deemed desirable in women and men. The paid workplace came to seen as an arena of competitions, rationality, and achievement- qualities that then became attached to men as inhabitants of this sphere. Conversely, the home was portrayed as a "heaven" from work and realm characterized by domestic, purity and submissiveness. These characteristics, in turn, were ascribed to those who were seen to be primarily responsibilities for this domain-namely, women." (Wharton 2005: 30)

But these gender role expectations are to be fulfilled. The members of society need to be taught about these role expectations. They need to be taught about appropriate masculine and feminine behavior. For these the member of the society needs to be socialized ".Socialization refers to the processes through which individuals take on gendered qualities and characteristics and acquire a sense of self." (Whartone 2005:31) Through these process the members of the society get to know what they are expected as a female member or as a male member of the society. This socialization is done by certain agents and family being the first agent of gender role expectation. The expectation from a male members of the society to be the bread winner of the family are institutionalized through the agents, similarly the expectation from a female member to be caring, loving and emotional, are expressed and reinforced through the socialization. However there is a psychological explanation for women being more caring and the reason for regarding care work as exclusive women's domain degrades its importance, as Lawrence Kohlberg's six stages moral development scale showed that care represents lower level of moral development as compared to justice. Thus claiming that women are less morally develops as compared to their male counterparts.

But he was criticized by care focused feminist Carol Gilligan, who showed that men and women have different basis of morality. Thus women's morality is neither better nor worst then this men. But this theory doesn't explain the fact why men and women have different basis of morality (Tong, 2009:163-195).

Thus Gilligan proved that women's moral development is neither better nor worst them men rather it is different from each other, as the basis of moral ethics are quite different for both the sexes.

The next section will try to deal with social consequences of malaria on women. The section tries to see how gender role expectation under the backdrop of malaria endemicity increases their work burden.

1.4.2 Women's role as Care Giver

Women in many societies spend considerable time and energy in taking care of the children, old and sick people. Even in the Final Report of the WHO Commission on Social Determinants of Health (2007), it came out that care is exclusively women's domain. However taking care of the family members is totally unpaid and many a times does not get that recognition of productive work that contributes to the family income. Bhatia (2002) while analyzing the data from time use survey found that working women had to shoulder triple burden of work, she had to manage her paid labor, along with that she had to do household chores, and deal with unpaid care work of the children, elderly and sick people. He further cites the time used survey across six states among the System of National Account (SNA), the extended-SNA and the non-SNA activities, conducted by Central Statistical Organization, between July 1998 and June 1999. It came out in the study that the time spend on work that includes household chores, management and shopping for own household, taking care of the children, sick and elderly in the household and the activities involving community services and help to other households, by men and women combined together of all the six states, women spend more time (53 hours) on an average in a week as compared to their male counterparts (45 hours) on an average in a week. Further desegregation shows that SNA activities by men takes more time then women, however extended SNA that includes unpaid care giving is exclusively women's domain, but many of the SNA activities by the women are unpaid. Further women in rural area spend more time in SNA activities as compared to their urban

counterpart. But there is no rural urban differences in the time spend in extended SNA activities by women.

Drawing from this, it could be said that irrespective of the fact that more rural women are engaged into work outside their household but that does not allow them to spend less time in household chores and their responsibility as care giving. As women have to spend considerable time in both SNA and extended SNA activities so she can not spend much time in Non-SNA activities. This means to maintain a balance between work outside their household and their work inside their house, they have to compromise their leisure time. The study further showed that women above 60+ have to spend considerable time in household chores and educations have no impact on the time spend in household chores.

In three studies by Deosthali and Madhiwalla (2005); Rath, (2005), Swaminathan, and Jeyaranjan (2005); conducted in three different regions, showed that women involved in the economic activities are under triple burden of household chores, their economic activities, and their job as a care giver. The three studies conducted in the three different setting showed that women invariable have to deal with same situation.

In the first setting the study was conducted in the Narayangao area of the Maharashtra that had recently seen an inward flow of money due to grape export. Due to rise in grape export employment opportunity had increased, however along with that, it also caused many health hazard related to use of pesticides and other occupational hazard like pains and posture related aches. The data collected by the CEHAT shows that women working in the vineyard report more of occupational health problem, the reason could be due to additional burden of household chores. But due to their work in vineyard and in their household, they can't seek health care as compared to their counterpart who doesn't work in the vineyard. Thus their work as a care giver puts her in disadvantaged position.

In the second study, in Bombay city, with the change in the employment scenario the women had to bear the maximum brunt. As she not only had to contribute to the

family income by working as a daily wage laborer but also they have to cut back in their consumption. Along with that they had to do household chores either alone or with the help of any female relative like daughter, daughter-in-law, mother or mother-in-law. Their daily activities of these sorts also affect their leisure time. These women had the option of either working in any industrial unit or home based work, which can be considered as an extension of the industrial unit. However working in the industrial units gives them more remuneration as compared to the home based work. But only those women, who had any adult or adolescent girl and can replace her household chores, can work outside their home. Taking care of the sick is also her responsibility. Thus in this setting, burden of work is more on women who are the only female member of the family. They have to do their paid work as well as their household chores single handedly. Young unmarried girls are socialized in a way so that they can take the responsibility of their houses in future. Taking care of younger siblings is the responsibility of elder one. This triple burden of work takes a toll on their health, many a times.

In the third that is conducted villages in Tamil Nadu that has recently witnessed industrialization. The rapid industrialization has not only generated employment opportunity especially for women and adolescents in the industries but also it resulted in high rates of drop outs among them. The women working in the industrial unit not only have to work as a wage laborer but also they have to do their household chores alone. Rarely could they get any help from their partners, even after she returns back from the factory she can't take rest unless she has prepared the dinner for her children. This additional responsibility of taking care of the children is exclusively for married women only to juggle between her triple role of a care giver, wife and parent, women doesn't get time to eat before the days work begin. In the above three studies the working situations are quite different from the each other, but their work in their home sphere is quite similar. The consequences that they have to face as a result of their triple work burden are also quite similar. Their triple burden of their work at their home, their job at their work place and their job as a care giver makes their experiences quite similar.

1.4.3 Gender division of labor in tribal society

For tribal societies that according to some scholars, assign relatively better position to their women also. Even if this a debated issues, which is aptly pointed out by Xaxa, (2004) as there are many tribal communities in India, and every tribe is so much different from the other in respect to culture, language, demographic traits that, it is highly impossible to generalize among them. Similarly, women's role, rights and responsibilities differ from tribe and tribe. Similarly anthropologist and sociologist have different views regarding women's position in the tribal society. This ambiguity is due to the fact how "status" is being conceived by the scholars. One definition of status sees it as rights and duties. The second definition focus on the prestige and honor which gets manifested in terms of legal bindings and opportunity for political participation. Earlier literature focuses on the higher status of tribal women as compared to their cast counterpart on the basis of the inheritance, decision making, and mobility. However their work burden, their role in the village economic never got attention. But with the evolution of society patriarchy was established that was manifested through gender division of labor, forms of property and role of state and family.

The above discussion about establishment of patriarchy in tribal societies is useful in interpreting patriarchy in some of the tribal societies of the North East of India. In some tribal societies of the northeastern part of India similar kind of gender role expectations are exhibited, where women's role is defined as a care giver, as an agricultural laborer, and as the one who performs household chores. Shimra (2004), who conducted a study among the Talkul Naga to examine women's work, reveals that the gender division of labor is more prominent in household chores than in agricultural work. The Tankul Naga still practices *jhum (slash and burn agriculture)* cultivation. During the cultivation season although all members of the family, including the children, are expected to work equally, the domestic chores are exclusively women's domain. They are expected to rise early and perform all the household chores along with the help of the other female relatives. The mother is the main female member in the family. She had to perform all the household chores among that cooking are the main responsibility of the

mother with the help of her daughter. Male folk cook only when there is no female member available.

In the Time Used Survey conducted by the author among the Tankul Naga, the Housework, Extended housework, and Activities perform were modified according to their livelihood pattern and traditional economic system prevailing in the society. The study revealed that on housework on female spend more weekly average time as compared to their male counterpart. The housework includes (i) fetching water, (ii) feeding domestic animals, (iii) cooking, (iv) cleaning and washing, (v) home garden, (vi) care for children, (vii) care for sick and elder person, (viii) drying paddy and seed, (ix) pounding and husking, (x) construction work (fence, shed and repairing), and (xi) weaving and knitting. The difference in time spent on these activities by both the sexes shoes that housework is still women's domain. Where as in case of extended household activities, that include (i) personal care and self-maintenance, (ii) learning, (iii) community work, and (iv) social and cultural activities and leisure, the total time spent is almost same. Time spent on activities outsides homestead showed that average time spend by men weekly is more as compared to women. However, further analysis revealed that maximum works performed by the men are occasional. This could also be because; in tribal societies there is no specific difference between household chores and economic activities.

According to Kalpagam(1999:567), cited in SHIMRA, states that it is difficult to differentiate between household activities and economic gainfully activities in agrarian society that is still marked with significant amount of non-market activity.

Thus the study reveals that women have the same set of role expectation that are very much informed by patriarchal thinking. Their is no doubt that women in Tankul Naga society enjoys more freedom of choice which could be attributed to the absence of cast and class system in the Tankul Naga society. Woman's participation in agriculture is very much sought after but all these features do not relieve her from the traditional role expectations of household chores, care giving.

Similarly Chakraborti (1993) observes that, tribal women in Tripura are more laborious then men. They not only do the household chores but are also food providers in many cases. They participate actively in *Jhum* cultivation, although there is some gender division of labor. But with the introduction of settled cultivation in the tribal society, many of the women gave up *Jhum* cultivation and started working as an agricultural laborer.

So the Time Used Survey gives us an idea that irrespective of the social setting it can't be denied that these care works of the old, children and sick people are absolutely necessary for the normal functioning of the family. But Time Used Survey also have its limitations. As Neetha (2010)**,** pointed out that**,** although there are discrepancies in 1998-99 TUS regarding the methodology, classification of the activities which many times raises problem for national and international comparison. But it does give a picture of the time spend in care work. However numbers can't revel why women spend more time in care work or why "only" women are the care givers. To deal with such answers one need to see the underlying factors.

1.4.4 Social consequences of malaria among women

Malaria affects women in two ways; it affects them as a patient as well as a caregiver. As a patient she has to lose her work while as a care giver she has to take care of the sick person, and that increasing their work burden. Differential impact of malaria among men and women was also echoed in the Guide to Gender and Malaria Resource Report (2006) According to a study in rural Colombia, the illness of adult male increases the workload of the female member significantly as she had to take care of the sick member as well as replace him in the farm. In another study in the same report, it was found that in Ghana when the woman is sick her job is done by some female relatives or neighbor including her economic activity of trading or harvesting. And if a mother takes her child to the hospital a female relative will take over her duties.

Vlassoff and Bonilla (1994) states that when ever a family member falls ill, women's work load increases and they uses their leisure time to take care of the sick person. However when women themselves are sick they tend to defer their treatment because their day to day activities is essential for normal functioning of the family. Bonilla et al found that when a woman is ill with malaria her duties are generally replaced by any female relative or neighbor and she has to catch up with her duties in her recovery period. In case of resource scarcity boys are more likely to receive medical attention than girls and women with little or no cash are more likely to use the services of traditional healer than bio-medical medicines because traditional healers can accept payments in kind. Their preference for traditional healer is also rooted in their inability to miss their domestic tasks, walking long distance for medical practitioner and possibly disappointment in the medical practitioner or medicines are not available. At the personal front women experiences high stress at the time of illness episode in their family. Their role as the care giver of the family and their traditional role expectation places them at high level of stress. As bio medical side is only concern with pregnancy and reproduction these dimensions and consequences remain unanswered.

Even Rahman *et al* (1999) found in his study that, for women working as *murshid* (Health Educator) in central Sudan, it is very difficult to co-ordinate between their work in public sphere and their household work. The study was conducted in the central Sudan to learn about the women's contribution in control and management of malaria through The Blue Nile Health Projects (BNHP1980-1990).

Preference for traditional healer among the women also arises from the insensitivity of the health service system towards the local cultural norms like:
In many cultures, women cannot visit health centre or elsewhere unaccompanied and the lack of a male chaperone may make it possible for women to act upon their desire to go for treatment (Vlassoff et al., 1995; Khattab 1993 cited in Tanner and Vlassoff)
This finding was again authenticated by another study in India cited in Tolhurst, R et al (2002) the study revealed that young single women are particularly too embarrassed to

seek assistance from a male physician and this was associated with predominance of male attendees.

Women's gender role not only makes the social consequences of malaria harsher for women it shows its bearing in access to health care once they are affected. Many studies cited in Tolhurst, R *et al* (2002) have found that women lag behind in utilization of services but their day to day activities debar them from using the services at the onset of the disease further loosing their economic activities means loosing on the cash income especially in Sub-Saharan Africa. However the factors that affect the utilization of services differ with the cultural context as well as socio-economic and ethnic groups and the types of household so women's and men's health seeking behavior can't be generalized. Further gender role often disapprove women to place values on their own health, infact gender role prohibits women to eat after everyone. Along with that woman's inhibition to seek assistance from male physician also add on to that. The social consequence of infectious disease are often more severe for women then men. Their economic activities although undermined previously but the burden of illness particularly places heave burden of work on women, which is an additional responsibility besides their role of care giving.

As Ettling *et al* (1989) cited in Vlassoff C and Elssy Bonilla showed that there is important sex difference in attendance at malaria clinic where as population based study of the same area showed that there is no difference in the infection.

The difference in such case reporting calls for more gender sensitive malaria control Programme. Arguing in this line Tanner and Vlassoff (1998) for successful malaria control Programme a combinations of epidemiological features and gender variables are important. Epidemiological features like levels and distribution of risks of acquiring infection, levels and distribution of risk of developing disease, levels and distribution of risk of developing severe disease and death are to be combined with gender variables like economic activities, social activities, and personal activities.

From the review of literature it came out that the reason for division of labor in the line of sex is attributed to women's ability to reproduce that is believed to put a natural limitation in her active participation in hunting and gathering. However this argument has been countered many a times rather the sexual division of labor in hunting and gathering societies is attributed to their lack of access to the weapons. This sexual division of labour, which is believed to be prevalent from the hunting and gathering societies, is still prevalent in industrial societies, where men are considered as a bread winner of the family and women are confined in the four walls of the house. At the domestic sphere women were allotted the job of care giving to her family. This sexual division of labour is not at all based on the sex rather it is based on gender.

Different Time Used Survey and other empirical studies across societies show that women spend more time on household chores, caring for sick, old people and children. This burden is more on women who work outside their homestead. This confinement of women at the domestic sphere has given rise to role expectations and these role expectations are fulfilled by the process of socialization.

The reason for regarding care work as exclusive women's domain degrades its importance, as Lawrence Kohlberg's six stages moral development scale shows that care represents lower level of moral development as compared to justice. Thus claiming that women are less morally developed. However care focused feminist Carol Gilligan, showed that men and women have different basis of morality. Thus women's morality is neither better nor worse then men. But this theory doesn't explain the fact why men and women have different basis of morality. The reason could be attributed to socialization process, where different agencies of socialization work towards fulfilling the gender role expectation of its members.

But the literature reviewed here doesn't give an insight about why women had to suffer the differential social consequences of malaria. The literature reviewed in the earlier sections also doesn't give an account of whether all women have similar experience of these consequences or does it vary according to class, age structure. The

fundamental factors that are responsible for these different consequences are also unclear in the reviewed literature.

The present study tries to take the findings from literature review a step forward. It tries to see which sections of women are most affected with the malaria endemicity. It also tries to see the forces playing in the lives of the women that make the differences with in them. Further there is a paucity of work in this topic in Assam. As the study area is considered as malaria endemic so it is expected that this work will bring out the gender aspect of malaria endemicity.

Chapter 2

Methodology

2.1Conceptualization-

It is conceptualized that gender role makes the experience of malaria quite different for both male and female. For female the experiences of malaria is more harsh both in social and economic realm. This gender role makes their access to various life resources including their access to health quite challenging. As malarial symptoms can imitate the symptoms of other diseases, so women's own perception about their own health becomes quite important. Consequently it affects their well-being. Their unpaid labor essentially in the form of domestic work goes unnoticed quite often but this unnoticed labor many a times either deprives them to access health facilities or adds on to their burden. Further, their role expectation makes their life more difficult. Their role as a caregiver adds on to their existing burden of work. But this role expectation differs by way of the relation with the head of the family, making the life of the younger daughter-in-law more difficult.
Considering the fact that the universe of study is a Malaria endemic zone and fever being a common thing, many a times "merely fever" delays in initiating the treatment. But while talking about the impact of malaria in socio-economic realm, it was kept in mind that disparity in the class background makes the whole experience and impact quite different.

The study here tries to explore the socio-economic consequences of malaria among the Bodo women that claims to assign a relative better position to women. The study further tries to look at the structures of inequality of gender and class that makes these differential experiences. Being the member of a particular tribe they are subjected to some taboos, traditions and customs especially to tribal customary laws. These customary laws define their role in various spheres of life. In an agrarian society which is still untouched by market economy and family labor being the main source of labor, these customary laws become more pronounced. So to understand the consequences of malaria, these driving forces are also needed to be considered. The gender division of labor forms an integral part in different subjective experience of Bodo women. Capturing their

subjective experience as a result of the intersectionality of these factors is also under the purview of this research.

2.2 Specific Objective:

To study the subjective experiences of women who are or have suffered from Malaria in the last one year.

To study the consequences on women in terms of work burden when any family member is suffering from malaria.

To study women's perception about their own status that influences the health seeking pattern.

2.3 Broadly the research tries to find out-

The broad objective of the study is to understand the consequences of malaria on Bodo women in the backdrop of persistent structural inequalities of class and gender.

2.4Research Question :

Why do women get selectively affected by Malaria? How does their role as caregivers affect their work burden ?

What changes are there in women's work burden when some family member is suffering from Malaria?

How do women manage when they themselves are suffering from Malaria? How women's roles and responsibilities at the level of household affect their health?

What course of action is followed by women when they suffer from malaria? What are the factors which facilitate and /or hinder their access to health service system ?

2.5 Research design: The aim of exploratory research is used to explore a relatively unexplored area. It is used when relatively less work has been done in that area. Through exploratory research can be used to propose a hypothesis, which can be tested later on .It is used to bring out the scope of the research.

Even in the present study, the socio-economic effect of malaria among the tribal women has not been studied. Even through there are some studies conducted in the African region, but it didn't discuss about the persisting structural inequalities prevailing in that societies. It left out to explain how these structural inequalities put different effect on different women. Thus, it was thought appropriate to use exploratory research design ,so that it could discover the forces, specific to the Bodo society ,that makes this differential impact

The sample for the study was selected through the following process.

The study village was selected as follows. –

Assam reported the highest number of malaria deaths. According to the data from the ministry of health and family welfare Assam has the highest number of malaria deaths among the northeastern states. (www.indiastat.com/table/health/16/malaria /17802/409578/data)(See in A1.4 and A1.5).Chirang is one of the eight highly endemic districts of Assam. (www.pipnrhm-mohfw.nic.in) This village has a hundred percent Bodo population. It has 39 household with all of them being in agriculture.(Survey report and householder family member) Dynama village comes under Bamungaon Sub centre. The data from the PHC reveals that this Sub Centre is regarded as one of the high risk Sub centre under Sidli PHC. The village recorded a malaria death this January. The village level data is only available for the month of July 2011, when enquired about this non availability of data, it was told by one of the health workers that ,the village was accidentally left out in the surveillance. The village is situated between Runuikhata State Dispensary and Bamongaon Subcentre, with a distance of 8 KM and 6KM from the village respectively. So it was thought that, it might come under either of the health institution which eventually led in the exclusion of the village. It was only after the report of a malaria death, it was realized that the village has been left out of survillance.

2.6Tools of Data collection:

2.6.1Interview Guide was used because the researcher wanted to get certain kind of information which was required from each respondent, like socio-economic demographic

indicator. But certain questions need to be rephrased to make it understandable for the respondent. Thus allowing the researcher to interpreter the question to elicit response. It allows deep probing when ever it was required. It also gives the freedom to the researcher to omit or add some questions depending on the situation. Along with that it was felt necessary to capture the subjective experience of the women about their household works or taking care of their family members who were malaria patients. It was considered necessary to portray their feelings about their own health and of being a malaria patient Interview guide helped to depict their experience of caregiver to their family members who had malaria.

2.6.2 Non participant Observation technique was used to supplement the information as it allowed the researcher to collect information that was impossible to express verbally. It gave the opportunity to the researcher to encounter any unexpected circumstances. It helped researcher to establish rapport with younger daughters-in-law, who other wise feels uncomfortable to speak in front of their in-laws.

2.7Structure of the study village and research respondent

While going through the village record it came out that there are 39 households and all of them are agriculturalists .The maximum land holding is of 2.67 Hectare and the minimum is of less than 1 hectare (401 hectare). According to the agricultural census 2005-06, land holdings below 1 hectare (Marginal), 1-2 hectare (Small), 2-4 hectare (Semi-medium),4-10 hectare (Medium), 10-above (large). Based on these criteria the whole village was divided into three categories according to their land holdings-

(i) Marginal (marginal category) - land holdings below 1 hectare

(ii) Small (medium category) -1-2 hectare

(iii) Semi-medium(upper category) - 2-4 hectare

There are 18 households in the Marginal category, the Small category comprises of 11 households and Upper category consists of 10 households.

As the researcher aims to study the socio-economic effect of malaria in women, the main respondents of the study are women. Women are not a homogenous category, it includes women of different ages and class and the intensity of the impact of Malaria might differ across these variables. So they are selected according to the criteria of class, age, relation with the head of the family.

Thus we have three sets of respondent based according to the relation with the head of the family –

Wife, Daughter-in-law, and Unmarried daughters.

They were further divided into the three strata.

Further symptoms of malaria can be divided into two categories specific and non-specific.

(i) Specific symptoms could be Fever (regular/irregular) along with chills, rigor, nausea and vomiting and headache.

(ii) Non specific symptoms can imitate other diseases like viral infection, enteric fever ,respiratory infection, running nose, diarrhea, dysentery, lower abdominal pain, skin rash ,abscess, painful swelling of joints, ear discharge, lymphadenopathy, enlarged liver, enlarged spleen.

A patient from endemic zone reporting with these symptoms or recently been to a malaria endemic zone should be suspected with malaria.

Thus based on the literature and discussing with the local medical officers, a check list was prepared, so any respondent who herself or any family member who had the above mentioned symptoms were considered as a suspected case of malaria.

As mentioned earlier there were 39 households and the researcher went to each household with the checklist of symptoms of malaria.

2.8Few Operational definitions for the study-

A 'household' is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from

doing so. The persons in a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a Census house but do not take their meals from the common kitchen, then they will not collectively constitute a household. Each such person should be treated as a separate household. The important link in finding out whether it is a household or not is a common kitchen. There may be one member households, two member households or multi-member households. (Census of India ,2011)

'Work' is defined as participation in any economically productive activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. It even includes part time help or unpaid work on farm, family enterprise or in any other economic activity. All persons engaged in 'work' as defined above are workers. Persons who are engaged in cultivation or milk production even solely for domestic consumption are also treated as workers

Reference period for determining a person as worker and non-worker is one year preceding the date of enumeration (census 11)

According to N, Neetha (2010) Care work in simple terms involves care of a person, which could be either paid or unpaid. Paid Care Work could be care of a person in lieu of any monetary rewards, however, unpaid Care Work involves care of a person without any monetary remuneration. However Care Work can be interpreted in a narrow sense as well as in broader dimension. In narrow sense one could define it by simply taking "care" of any person, thus it includes care of the children. sick people and elderly. This definition of care doesnot includes cooking, cleaning and other activities that are directly related to care. The second narrow interpretation of Care Work includes the physical time spend on feeding child or an elderly person. This definition doesn't include time spent on supervision, traveling and taking responsibility of the person. The third alternative definition includes "domestic work". This definition does not include child care, care of the elderly or taking care of the sick or taking the sick person to the hospital.

But in India household chores and taking care of the person are overlapping. But focusing in only one aspect will only definitely limit its scope .

So Care work in this research includes household chores like cooking, cleaning etc and direct care of the person suffering with malaria along with that the work of the person in the farm, as a replacement of the sick person. So Caregivers are defined as people who does the care work without any monetary reward.

2.9Processes of data collection- The above mentioned study was conducted from the month of October 2011 to December 2011.The first phase of study was conducted in the month of October and the next phase of study was conducted in the month of November to December.

2.9.1Phase I

Selection of the Village: The initial phase of study consists of selecting the village for the study. In order to select the village, various secondary sources about the State and the Districts were consulted along with meeting with the health officials at various levels, viz. Joint director's office, PHC, Sub centre. The criteria for the selection of villages were hundred percent Bodo population, malaria endemicity, and relative far off from the national highway. Based on these three criteria, three villages were selected initially. But as the area is still witnessing armed conflict, so it was advised not to go to the other two villages. However the initial problem was to locate the village. As the village has a very poor connectivity. The village is near the Indo-Bhutan border with no public transport. The nearest transport facility is at 6 Km from the village. It also included general conversation regarding the village economy and day to day life, with the village headman. The village headman introduced the researcher to the community.

Identifying the respondents and rapport building: As mentioned earlier, symptoms of malaria could be specific and non- specific. So based on the literature survey and consulting with the doctors there, a checklist was prepared and a basic household survey was conducted in order to identify the respondents. Further, the respondents were divided as - malaria with specific symptoms in the last one year, suspected cases of malaria, and

respondents whose family members had malaria with clinical sign and symptoms in the last one year, along with those respondents whose family members are suspected cases of malaria. Along with that, information was also gathered regarding the history of village, cropping pattern, main economy of the village, location and accessibility of the village. Besides that, interaction with the younger generation gave an insight into their aspiration and hopes, their views about their prevailing options of livelihood.

The researcher had to make repeated visit to the field to establish rapport with the community. These informal talks with the villagers gave an opportunity to the researcher to introduce herself to the community. After few visits to the field, the respondents became familiar with the researcher although they were not clear about the purpose of the visit. Many of the respondents mistook the researcher for doctor. After this confusion, the purpose of the visits was explained to them properly. Although establishing the rapport with the men folk was not that difficult for the researcher but it took quite some time for the researcher to establish rapport with the female members. This could be attributed to the researcher's inability to speak Bodo. However, as the researcher picked up the local dialect, it became much easier to talk with them.

Thus the initial phase of building rapport with the respondents established a sense of confidence of the community in the researcher, thus allowing the researcher to share their personnel experience with the researcher. Many a times, the researcher's query, which otherwise seemed quite obvious to them, would take them by surprise which might lead to light moments of interaction, which would further lead to other query.

Pre-testing of the tool: Two separate interview guides were constructed for the respondent who suffered from malaria (clinical sign and symptoms and suspected cases) in the last one year and respondents whose family members suffered from malaria (clinical sign and symptoms and suspected cases) in the last one year . It was tested on some of the respondents during the month of October 2011. The interview guide covered the broad objective of the study and required changes were made accordingly. Also pre-test helped in identifying broad themes .This themes were later explored through in-depth interview. During this phase, recordings were done, short note were also made along

with the recording. Before every interview, the purpose of the interview was clearly mentioned and consent of the respondent was sought to record the interview.

2.9.2Phase II

After the completion of phase I, the feedbacks regarding the interview schedule were incorporated and necessary required corrections were done. Following this, the next phase started from the month of November till the month of December.

In-depth Interview : The interview schedule developed for this phase generally included the socio-economic demographic details of the respondent. Since the village has agrarian economy, so it was decided that land holding will be the basis of classification. The records of land holding was obtained from **Village Record** along with that, the interview schedule had questions regarding the episodes of malaria in the family, workload, role of respondent as a caregiver or who was responsible to take care of the respondent, cost of the treatment and first and second level of contact.

Episodes of malaria in the family: Since the study tries to understand the consequences of malaria in terms of work experience among the women of Bodo society. So it was considered necessary to record the episodes of malaria in the respondent's family in the last one year and the respondents were questioned accordingly. As the study was conducted in a malaria endemic zone, so there were many respondent who themselves had malaria along with that their family members also had malaria. These respondent's were both caregiver as well as care seeker.

Workload: Work load was further divided into household work and working outside home. While posing questions about household works, they were asked separately about each household chores like- cooking, cleaning, washing .While enquiring about work done outside their home, it was clearly mentioned about their work that gets them economic benefit.

Role of respondent as a caregiver or who took the role of caregiver when the respondent was a care seeker: Under this theme, the respondent's were asked the jobs

that they had to do as a caregiver. They were specifically asked about their job that they do to take care of the patient.

Cost of treatments: Although this question was not asked during the Phase I, but it came out in the initial interviews that many of the respondents had to sell of their assets for treatment. As a result, it was added in the interview schedule for phase II.

Further staying in a malaria endemic zone, it was quite obvious that these women had experienced episodes of malaria in their life, thus, it was necessary to capture their subjective experience of those episodes. Further, women's own perception about their position in the family will many a times get reflected in their perception about their own health. Living with a malaria patient or losing a family member to malaria, will definitely leave a mark in their lives Thus the interview guide used, tried to elucidate these aspect of their lives. The interview schedule was felt necessary after the first phase. It came out in the first phase of data collection that these women, who are staying here for quite some time and had lived the consequences of malaria, have unique experience to share .Thus an interview guide was thought to be appropriate for that.

Interview of the other key informant

Apart from conducting interviews with the women who had malaria along with women whose family members had, interviews were also conducted with the doctors in Runikhata State Dispensary and Dr Jatin Brahma's Clinic. These two health institutions are frequently visited by the respondents. The local medical shop, which is the first level of contact for the most of the respondent was also interviewed.

Observation: Observation helped a lot in framing the questions for the interview schedule. In the first phase of visits, some patterns were observed. So, while planning the next phase, these were kept in mind. Like it was observed that daughters-in-law donot feel comfortable to discuss about their subjective experience in front of other members. So it was decided by the researcher to ask these questions on her next visit.

2.10 Experience in the field

Since Dymana village is a forest village located near the Indo-Bhutan border marked with poor connectivity, the initial problem was to locate the village. With the help of some local people, the village was located by the researcher. It was well realized by the researcher that, to get introduced with the village, it is very much important to talk to the village head man. Accordingly, the village headman was approached .But amazed by the researcher's educational level, the village head man asked another man to help me out. That man happened to be an ex-village headman. He accompanied the researcher in all the household visits. It was because of him that the researcher was easily acceptable by the villagers. Although there were initial query about the study and respondents were hesitant to talk, partly because of researcher's inability to speak Bodo language and partly because of her being an outsider. But after he started accompanying the researcher to the households, this problem was solved. He not only explained the purpose of my visit but also act as a translator whenever needed. The researcher soon picked the local dialect and the rest of the interviews were conducted in that dialect only.

Most people in the village were amazed by the fact that the researcher has come from Delhi and could not comprehend the research's interest in the village. In fact while traveling to Dynama village the researcher had to walk pass two villages and many a times people from those villages would also ask the researcher about the purpose of her "regular visit" to Dynama.

Initially it was thought that the researcher is a doctor who has come to treat malaria patients and asked if she could treat other patients as well. Initially it was difficult to explain them about the purpose of the researcher's visit. Many a times the researcher had to face queries like what the researcher would get with all this information? Is she working for the government? Finally, it was explained to them that as their children appear for exam and obtain degree, similarly after this work I will obtain a degree.

As the familiarity with the villager's grew, they became more expressive about their views on many things like their preference for many of the local medical shop as their first level of contact, their reason for not opting to go to the sub centre.

The experience with the grass root level health workers was also quite amazing. It came out in the interview that the ASHA worker charges 10 rupees per bed net although it is suppose to be free of cost, so when the researcher wanted to talk to the ASHA worker regarding the distribution of bed net, she thought that the researcher has come for some departmental inquiry. Same is the case with MPW worker. In order to get the village level data, the researcher had to talk to many MPW workers but it was always thought that the researcher is a government official who needs the data. Even with the RMP also, who could not believe that the researcher is not a medical doctor.

The researcher's encounter with the doctors in the Runikhata State dispensary was also marked with confusions. The doctors there thought that the researcher is a medical doctor and had come to collect data for that. The staffs in the joint director office Kajalgaon were also under the impression that the researcher is a medical doctor, so they were quite supportive and helped the researcher in acquiring the data.
However conducting interviews were frequently interrupted with children constantly disturbing in between. Moreover, it was difficult to make a daughter-in-law speak in front of her entire family members. For this, the researcher had to make repeated visits to the respondent.

In a nutshell, the field visit was marked with its share of ups and downs. But more so, it was a learning experience for the researcher, it gave her an insight into the world of these women who are constantly negotiating with their gender role expectations. Staying in a malaria endemic zone, these lives of women are constant struggle for the survival. It also enlightened the researcher about certain do's and don't in the field visits. Thus, this field visit helped the researcher in presenting empirical facts as much as possible, along with the perceived view of the respondents.

2.11Limitation of the study-

1) As malaria can imitate the sign and symptoms of other disease, so, while preparing the checklist, these symptoms were kept in mind. However, these

symptoms may or may not be suggestive of malaria as clinical tests were not conducted on individual patient.

2) Due to poor availability of village level malaria record, the endemicity at the village level cannot be shown.

Chapter 3

Dynama Village Profile and Gender Division of Labor.

This chapter discusses with the profile of the study village and socio-demographic profile of the study village along with gender division of labour in the village. This chapter is divided into three sections, the first section deals with profile of the study village, starting from state's profile, it reaches to village profile. The second section tries to locate women's role into the village economy. The third section deals with respondent's profile.

The area recently witnessed identity movements among the Bodo, so the maximum literature on Bodos are limited only to the conflict .Secondly, the village comes under the Chirang district which has been formed recently, as a result the records of the district are not maintained properly.

3.1Describing the State, district and village Profile

Spread across an area of 78,438 sq Km, the State of Assam is located between 90-96 degree East Longitude and 24-28 degree North Latitude. It is also known as land of blue hills and red rivers. Largest among all the Northeastern State, Assam shares its international border with Bhutan in the North and East and Bangladesh in West. Along with that, it is surrounded with Arunachal Pradesh in the East and North, Nagaland, Manipur, Mizoram and Meghalaya in the South and West Bengal in the West. It has a total population of 31,169,272 (2011 census) with sex ratio of 1000:954.The state has a literacy rate of 73.81 (ibid).It has 27 districts along with the Four districts that come under Bodoland Territorial Autonomous District. Brahmaputra, the lifeline of Assam passes from the Northeast part of the state to West. Another major river is Barak that flows in the Southern part of Assam. Assam is divided in Brahmaputra valley and Barak Valley on the basis of the two rivers.

Assam has many ethnic groups like Austroasiatic, Tibeto-Burmese, Indo-Aryan speakers and Tai-Kadai speakers. The most spoken language in Assam is Assamese,

followed by Bengali, then Bodo. Assam is primarily an agrarian economy with maximum of its population dependent on agriculture. The economy of the state depends mainly on agriculture, Tea and Petroleum.

3.2District Profile

The study village comes under Chirang district. The district is named Chirang after an old spelling for Tsirang district of Bhutan. Chirang district has been carved out from erstwhile Bongaigaon district .It shares its border with Bhutan. It comes under Bodoland Territorial Autonomous District (BTAD) .The district has 80% of Bodo population. It has a population of 4,81,818 out of which male population is 2,44,675 and female population is 2,37,143.It has a sex ratio of 969 (2011 census).

The Bodos are a race of the Mongolian people who are described to be the inhabitants of a country north of the Himalayas and West of China. This land is known as Bod. The word Bod is supposed to mean a homeland. It is also said that there were many parts of the country known as HorBod, Kur Bod,etc.

The inhabitants of Bod country are known as the Bodo-Ficha or Bododocha or Bodosa (Bodo means land and Ficha or Cha means children, hence children of the Bod country). In course of time, they come to be known as simply Boddo, Bodo Boro.
Bodos are living in a scattered manner throughout the North-Eastern region of India. The State of Assam is the main abode of the Bodos. Their main concentration is now on the northern bank of the river Brahmaputra, Goalpara district in the west, to Lakhimpur district to the east (Brahma1992:3).

The Bodos in Chirang district are mainly farmers; maximum of them have agricultural land which is mainly dependent on family labor with the women doing bulk of the work.

The district has two PHCs Sidle and Ballamguri. The study village comes under Sidli PHC. Data from the Office of Joint Director Heath Services Chirang Kajalgaon reveal a very high proportion of *Pf* cases in the district.(A.1.3) This district has been functional from 4th June 2004. It has been carved out of Bongaigaon District. Even before the forming of the district, the district had a high ratio of P*f* cases. Three years epidemiological data (2004,2005 and 2006) reveal that Sidli PHC has an API more then 1. The ratio of active and passive surveillance revealed a high ratio of active surveillance. Now this low reporting of cases by passive surveillance may be because of the fact that malaria in endemic zone can imitate the sign and symptoms of other diseases. (A.1.2) So it may be the inability of the patient to relate this sign and symptoms to malaria. However a separate Joint director office was set up only after 2005.Till then it was functioning from the Joint Director Bongaigaon. Even after being a new district from 2005 the data are available only from 2009 The data from January 2009 to June 2011 showed that, there were 9270 cases. The data also revealed a high ratio of P*f* cases in comparison with P*v* cases.(A1.1)

3.3Village Profile:

Dynama Forest village is situated near Indo-Bhutan border under Dattapur Village Council Development Committee. Presently the village comes under forest department.

The village had been recently inhibited by the people. According to Dimbeswar Basumatary (Aged 69), the oldest man in the village.

"*Maximum people in the village came from the neighboring area of Kokrajhar district and Bongaigaon district in the late 70's. We were one of the first families that came and settled here. It was a forest area. We cleaned the jungles and settled here. Initially there were only few houses but now it has many houses.*"

3.3.1Location

Dynama Village in the north shares its boundary with Bhutan .The nearest transport facility is at 6 Km from the village, which is situated at the next village. In the east it

shares its boundary with Duttapur village. The nearest town is Bongaigaon which is at a distance of 26 Km from the village. Bus or auto rickshaw takes one and a half hour to reach Kashigotra which is situated at NH 31. From there, auto rickshaw will take another half an hour to reach Bamongaon; from there, a walk of 6 km leads to Dynama Village.

3.3.2Accessibility

The nearest sub-centre is also in the same village. The Post office is located at Duttapur village. The village has a government primary school and all the village children go to the school. Most of these children are first generation learners. Drop out rate among the villagers is quite high, except the two families who are incidentally from the upper strata of the village; none of the villagers could complete higher secondary school. The nearest high school and college is at the highway. It got its pitch road last year only. The village has only two cemented houses and all others have mud wall and tin roof. There is no electricity in the village, however, the two cemented houses have their own source of electricity. One of them has solar panel set at the roof top and other has battery and inverters as source of electricity.

3.3.3 Composition of the population

It has a total population of 173 (Survey Report and Household family member 2011), out of which female population is 80 and 93 is the male population.

The village has a hundred percent Bodo population, with all being Hindu households. The Bodos are either *Bathou Dharma* followers or *Brahma Dharma* followers. The followers of Bathou Dharma sacrifice animals and birds in pujas while Brahma Dharma followers only offer flowers and fruits and pulses. The village had only one household which is *Bathou* follower and rest being *Brahma* household.

3.4Main economy of the village

The Bodos in Chirang district are mainly farmers; maximum of them have agricultural land which is mainly dependent on family labor. Rice is mainly cultivated in the region. As mentioned earlier, farming in the region is mainly family oriented and more of subsistence economy. All the families have their own farming land in the village and it is expected from all the family members to be present at the time of sowing the seeds and participate in the activity. But there were two families in the village who have given their land on *Adi* (sharing basis). The reason being the absence of male members, who can plow the field. One of the respondent has lost her husband in insurgency, where as the other one has left her.

Besides farming, many families are also involved in other activates like selling home grown vegetables in the local market, fishing and selling them in the local market. They also have the concept of community fishing where the whole village participates in fishing. However these products are sold in the local market only after family's consumption.

Apart from that, some are involved in preparing and selling local rice beer from their home itself. Consumption of rice beer is a tradition in Bodo society and it is considered as welcome drink for the guest.Some have small tea stall in the local market. And weaving is very common among the Bodos. But this is done mainly for their own use.One thing needs to be mentioned here is that, all these activities which supplements to their earning is mainly done by lower strata women.

Although agriculture is the main source of income but a discussion with the young people reveal that they are not satisfied being agriculturist only, many of them are contemplating with the idea of moving out, either to Meghalaya to work as a daily wage earner in the coal mines or to Bangalore to work as watchmen.

3.4.1Women's role in the village economy

Women's role in the village economy can be seen in three themes mainly as- (i) agricultural worker (ii) working outside home stead (iii) domestic work. Although all women irrespective of her class background or relation with the head of the family has to do both of these activities but working outside is not a universal phenomenon in the village. Rather it is linked to relation with the head of the family and is mainly done by women of lower strata. But in all these above mentioned spheres women plays a predominant role. Her activities in these three spheres are engraved as her day to day activity.

As the respondents of the study are women, but it would have been erroneous to club all the women in one category as women is not a homogenous category. Their experience of either being a malaria patient or being a caregiver of a malaria patient varies according to their relation with the patriarch along with their class background. Thus, according to their relation with the head of the family, the respondents have been divided into three categories (i) wife (ii) daughter-in-law (iii) unmarried daughter.

3.4.2Women's work in the field:

The study had been conducted in an agrarian economy that still relies on family labor. The main crop cultivated in this region is rice, which is very much labor intensive. But in rice cultivation, women are expected to participate equally. In fact, some agricultural works are divided according to the gender. For instance, planting the first sapling is the duty of the daughter-in-law as she represents fertility and this is considered as auspicious. After that all the female members are expected to plant the saplings while men will only hold the plough. However, this gender division of labor is not universal rather it is particular to this part of Assam. However, in other parts of Assam, planting of the sapling is mainly men's domain and harvesting, which is exclusively for men in lower part of Assam, is mainly done by women in other parts of Assam. The detail gender division of labor in the field for the region is given below :

Table 3.1 Gender Division of labor in Agricultural Work

Agricultural work	Women's work	Men's work
Sowing		
Clearing the Sow Field		Manually removing the stones, thrones and leveling of field collection.
Preparing the seeds to sow.		Manually cleaning the seeds and keeping it under water for three/four days and cover it by banana leaf. Total time 5 days
Ploughing the Sow Field		Ploughing and leveling of field with cow and plough
Sowing		Manually sowing the seeds in the prepared field. Both (ploughing the field and sowing) the process in same day. These total processes take 1 month.
After 1 and 1.5 month later		
Clearing the Paddy field		Manually removes the stones, thrones and leveling of field with spade.
Manuring	For short distance only: Preparing manure (cow dung) carrying them to the field and spreading on fields.	For long distance only: Carrying the manure (cow dung) to the field and spreading on fields
Ploughing	Preparing foods or Tea at home and carrying it to field for worker	Ploughing and leveling of field with cow and plough
Sowing	Transplanting of the young saplings	Taking the young sapling from the sow field.

Weeding		Pulling out weeds and grass digging and turning wet soil with spade.
After 4 months		
Harvesting	Preparing foods or Tea and carrying it to field for Harvester or worker	Cutting the crop with sickle and tying it into bundles and preparing them to be carried to the house for threshing.
Transporting harvest		Carrying the crops to house on their head.
Threshing	Sometimes women are also involved in threshing related activities like cleaning grains etc.	Driving cow over the crops.
Winnowing	Removing the husk from the grain by using winnowing trays.	
Pounding	Process of de husking grain by *dheki(A heavy wooden pestle used by foot to de husk rice from the grains)* pounding with heavy wooden pestle and use of feet.	

Source :Primary study

The above table shows that in Dynama village, out of fourteen works, men are suppose to do twelve works where as women does seven works. But a closer observation reveals that there are certain jobs that are exclusively done by women and men, however, jobs that are solely meant for men requires women's assistance. But women's work like winnowing, pounding and infact sowing also does see men's participation. And for this reason, number of women in the family is quite significant.

Thus in a single women household, the woman has to plant all the sapling alone and in case of women of upper strata household, it becomes tedious to plant the sapling in such large piece of land.

Therefore, many women ask their niece or sisters or any other female members to stay with them, so that they can help her out in the domestic work as well as field work. As Binu bala Narzary (aged 39 year, wife, semi-medium) narrates:

"I do not have a daughter. I have two sons, so I had to do all the household chores alone plus during the sowing I have to plant the saplings alone. It was very tiring for me to work in the fields as well as doing the household chores alone, so I asked my niece to stay with us, she helps me in the household chores as well as she works with me in the field."

3.4.3Women working outside their home

Along with these activities in the agricultural field, women in Dynama village are engaged in various types of other activities that are done to substantiate their family's income as most of these women who work outside their household chores are from marginal household. This type of work includes selling home grown vegetables in the local markets, fishing and selling fish in the local market, preparing and selling rice beer, tea stalls in the local market. However these works are done only at the subsistence level. So these products are sold in the market only after family's consumption. For these reason, they donot do it on a daily basis. Rather it depends upon the families consumption. Only wives are engaged in such type of activities, no daughter-in-law or unmarried daughter is involved in these types of activities. Some of the respondents run their business independently.

As Banachi Basumatary (wife, aged 25, marginal strata) narrates:

"I prepare and sell rice beer and pork from my house. I run my business independently as only I know how to prepare rice beer, moreover, my husband is neither interested in learning to prepare it nor he helps me in serving the customers. I have to do it alone. He is only interested in having them."

Whereas some of them works with their family members. As Nilima Borgoyari said (wife, 34 years old, marginal strata).

"I have a small tea stall which I manage along with my daughter and son. As I cannot look after every thing in the shop, so I need my family member's assistance."

3.4.4 Domestic Work

Although domestic work doesnot directly adds on to the economic activity but taking care of the male bread winner also indirectly adds to the economy. Like all patriarchal and patrilineal society, even in Bodo society domestic work is mainly woman's responsibility. This labor although unpaid, is socially essential for the maintenance of labor power. Bodo society is a patriarchal and patrilineal society and like any patriarchal society women are expected to do the household chores, which include cooking, serving, cleaning utensils, washing clothes, bringing water, plastering of the mud house, taking care of all the family members. It is quite unlikely of men in Bodo society to do any household chores. Young people in Bodo society are socialized in such a way so that they grow up to fulfill their role expectation.

Although domestic work is mainly woman's responsibility but as mentioned earlier, woman is not a homogenous category. So this role expectation is not same for all the women rather it very much depends upon the relation with the head of the family. It is expected from a daughter-in-law that she will do all the household chores assisted by her sisters-in-law relieving her mother-in-law from the household chores. However workload is very much dependent on the size of the family and number of female members in the family. Like in a joint family, it is always easier to manage the household chores with

more than one daughter-in-law or with unmarried daughters. Similarly in a nuclear family where it has only one female member, the household chores are entirely her responsibility.

Cooking is considered as the main job of all the household chores. In a joint family, it is always expected from the daughter-in-law to do the cooking. Thus in a joint family having more then one daughter-in-law, cooking is mainly done on sharing basis. Like Anjima (Age19, daughter-in-law, small) shares the household chores along with her sister-in-law.

"As there are no other female members in the family who could work, so me and my sister-in-law do all the household chores. Our mother-in-law does not do any household job, simply because as soon as the daughter-in-law- arrives, the mother-in-law do not work. I and my sister-in-law share all the household chores like if I am preparing the lunch, I will do the chopping as well. She will clean the house, wash the utensils. Similarly if she will prepare the dinner, I will clean the house in the evening, wash the utensils in the night."

And in case there are unmarried daughters, they are only expected to help, whereas the main responsibility is of the daughter-in-law. In case there is no daughter-in-law, the household chores are mainly done by the wife with the help of her daughter, if any. However in these cases, daughters are not supposed to cook, although they start learning cooking at a quite early age, they can cook occasionally. Rather they are expected to do all the household chores like cleaning the utensils, cleaning the house, and plastering the mud walls along with their mothers.

Somali Basumatary (age 34, wife, marginal strata)

"*I have two daughters and one son, all my children is still in school. My daughters help me in the household chores; they will clean the house, plaster the mud wall, sometimes wash the clothes, clean the utensils along with me. But cooking is my sole responsibility. My son doesnot do any household chores.*"

But in this agrarian society, the domestic chores are dependent on agricultural calendar also. At the time of sowing and harvesting, when work in the field is at its pick, women had to prepare tea and food for the family members working in the field.
As Georema Brahma (wife, aged 29, semi-medium strata) narrates:

"*During the agricultural season, our work increases, we have to prepare food and tea for the people working in the field. If the field is next to the house, they will come and have it here. But if it is a bit far we have to take the food there."*

After the harvesting of the crop, the crop needs to be spread out under the sun for drying. This responsibility is entirely born by the women only. This is the only household chore that a mother-in-law is expected to do along with the other female members of the society. As Binu Bala Narzary (aged 39, wife, semi-medium strata) states

"I *have a daughter-in-law who does all the household chores along with my daughter. My daughter is still unmarried and she needs to be proficient in the household chores, so she is sharing the household chores along with her sister-in-law. I only look after the crop that needs to be dried under the sun after harvesting. Although it is not my sole responsibility, who ever among the three of us get time does that"*

Along with cooking, serving is basically done by the person who does the cooking. So it is basically done by the daughter-in-law in case of a joint family or by wife in case of a nuclear family. Other things associated with the kitchen like pounding the spices, cleaning the rice and vegetables and pulses, chopping the vegetables, cleaning the kitchen, washing the utensils after each meal are always shared by the female members of the family. In case there are more then two daughters-in-law, it is shared among them and in case the family have unmarried daughters, then they would share it either with their mothers or with their sisters-in-law.

Thus gender plays its role while defining the role and responsibilities of these women, but it is not that all women are being subjugated equally, rather it depends upon

their relation with the patriarch. Even among these women, who gives order and who takes order is important.

3.5 Demographic Profile of the study village

Respondent's Profile

Dynama is a small village with population of 173 and 39 households. According to the agricultural survey of India, there were 38 men and 37 women category that are in the Marginal group. Whereas there are 24 and 21 men and women respectively from the Small category. Semi-Medium category consists of 24 and 22 men and women respectively. The information is shown in a tabular form below:

Table 3.2 : Profile

	Men	Women
Marginal	38(40.8%)	37(46.25%)
Small	24(25.8%)	21(26.25%)
Semi-medium	24(25.8%)	22(27.5%)

Source : primary study

Age –Wise distribution of the respondent

The above tables show the age wise distribution of the respondents. The maximum concentrations of respondents were in the age group of 14-19. It gradually decreases as we move upward in the age group.

Table 3.3: Age profile

Age group	No. of respondents
14-19	9 (32.1%)
20-25	4(14.28%)
26-31	4(14.28%)
32-37	2(7.14%)
38-43	3(10.71%)
44-49	2(7.14%)
50-55	2(7.14%)
56-61	1(3.5%)
62 and above	1(3.5%)

Source : primary study

3.5.2Level of Education the respondent

The table shows that maximum percentage of respondents' do not has any education. Whereas highest level of education is up to secondary level and this has minimum percentage of respondents in the said category.

Table 3.4 Educational Level

Sl. No	Education level	Percentage of respondents
1	Illiterate	42.85 %
2	Primary	17.85%
3	Middle	25%
4	Secondary	14.28%

Source : primary study

Respondents according to their class affiliation and relation with the head of the family

Respondents were divided according to their relation with their head of the family. Thus they were divided either as wife or as daughter-in-law of the head of the family or as daughter of the head of the family. They were further divided according to their class affiliation.

Table 3.5 Class and relation with the head of the family

Relation with the head of the family	**Upper strata/Semi-Medium**	**Middle/Small**	**Marginal/Lower strata**
Respondent themselves having malaria with clinical sign and symptoms			
Wife	1		
Daughter-in-law		1	1
Unmarried daughter	1		1
Respondents whose family members had malaria with			

clinical sign and symptoms			
Wife	1	1	2
Daughter-in-law		3	1
Unmarried daughter			1
Respondent who are suspected cases of malaria			
Wife	2	1	4
Daughter-in-law	1		
Unmarried daughter			
Respondents whose family members are suspected cases of malaria			
Wife	2	1	2
Daughter-in-law	1		2
Unmarried daughter	1	1	2

	Table 3.6 Respondents working outside their homestead according to their household types											
Respondent having malaria with clinical sign and symptom and suspected cases	Class			Working outside			Household Type					
	Marginal	Middle	Upper	Marginal	Middle	Upper	Joint			Nuclear		
							Marginal	Middle	Upper	Marginal	Middle	Upper
Wife	4	1	3	2	1	1	2			2	1	**3**
Daughter-in-law	1	1	1				1		1		1	
Unmarried daughter	1		1						1	1		
Respondents whose family members had malaria with clinical sign symptoms and suspected cases												
Wife	5	2	3	4		1	3		3	1	2	
Daughter-in-law	3	2	2	1			3	2	2			
Unmarried daughter	3	1	1				3		1		1	

The respondents were divided as malaria patient and as a caregiver to the malaria patient in their family. The respondents who were already divided according to their class affiliation and relation with the head of the family were subdivided according to their work outside their home staid and family type. The reason to show this was that it came out in the first phase of the field visit that many of the women work outside their home stead, however these tables further divides those women according to their class and relation with the head of the family. Further, it also showed how many respondents according to their relation with the patriarch are from joint family and nuclear family.

Chapter 4

Women as Malaria Patient and Caregiver

This section is deals with women's experience of being a malaria patient as well as their experience as a care giver. This section talks about the how their experience of being a malaria patient varies according to their class and relation with the head of the family. Similarly, it also tries to explore how the intersectionality of class and relation with the patriarch makes differences in their role as a care giver to malaria patient in their family.

4.1Women's experience of being a malaria patient

Being in a malaria endemic zone "fever" is a quite common thing .Along with that malaria in an endemic zone can imitate other disease also this section includes respondents who had malaria with clinical sign and symptoms along with that respondents who are suspected cases of malaria according to the checklist prepared with the doctors. The consequence of being a malarial patient could be divided in the categories (i) Domestic work (ii) Their work in the field (iii) Women working outside their home.

4.1.1Domestic work

As mentioned earlier, household chores are mainly a daughter-in-law's responsibility in a joint family and in a nuclear family domestic work are a wife's domains. Thus being a malarial patient, women has to lose their household chores. But losing household chores is very much dependent on symptoms as, only specific symptoms of malaria and certain other non specific symptoms of malaria that requires the patient to be bedridden are considered serious enough to miss household chores. So a respondent can lose their household chores only when she is bed ridden. Like Bishri narzary (aged 16 daughter, marginal category) states.

"I had malaria last September. After 2 days when the fever didn't reduce .I was taken to Runikhata State Dispensary .So I could not attend school along with that I could not help my sister-in-law in household chores."

Gaorema Brahma (aged 29 ,wife, upper category) states that:

"I had fever, running nose, and felt very week after the fever episode along with body pain. When ever I have fever I will get medicines from the local medical shop and after sometime I will feel better and will resume the household chores" .

The above statements also reflect women's perception about their own health where their own health is measured by their ability to perform their household chores.
Rest, after an episode of illness also depends upon the number of female members in the family, who can replace her in the household chores and relation with the patriarchy. The respondents can only take rest as long as they have the clinically manifested sign and symptoms. Thus a wife who is the only female member in the family had to resume her duties as soon as her sign and symptoms of malaria disappear. Asha (aged 34 upper category wife)

" I had malaria and my treatment was from home. I was in bed rest for five days. Initially I was taken care of by my husband; he used to do household chores like cooking, and cleaning. My unmarried sister-in-law, who was especially asked to come over to look after me . My sister-in-law stays at the nearby town with the my in laws. My sister in law had to leave, as soon as my saline was removed because she had to go to her parent's house. So I had to get back to her duties of cooking and cleaning, waking up at 4 in the morning. Although my husband helped me with the household chores (cooking) he used to cook the lunch but I had to cook the dinner. My weaving was totally stopped which I used to do during her leisure time in the afternoon".

For Bhumi Borgayari (16 aged, daughter medium category)

"When I had malaria, I was admitted to the Kokrajhar civil hospital for 4 days. After I came home I was rested for one week. For one whole week I didn't do any household chores nor did I go school. Even after one week I didn't do any hard work like I used to wash clothes ,or assisting my mother in kitchen ,or plastering the mud wall. I only assisted my mother but not every time. My mother asks me to take rest properly."

Sadwini Narzary (aged 24, Upper category, daughter-in-law) narrates that

"Due to my weakness, many a times I have to take rest from the harvesting (as my field work was the season of harvesting).But from my household chores, I could hardly takes rest. Even if I feel quite weak during my household chores, I can't take rest, because if I take rest between my household jobs, my in laws doesn't like it"

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From the above three narrations, It comes out that, rest also depends on the relation with the head of the family along with sign and symptoms of the disease . So, it is easier for a daughter to take rest for long period of time as compared to a daughter-in-law, who has to resume her household chores as soon as her clinically manifested sigh and symptoms of malaria are gone .

4.1.2Women work in the field

Dynama village being an agrarian village depends on family labor. Women's participation is highly sought after. So being a malaria patient also affects their work in field. Time of the onset of disease is very important to assess the impact on their work burden in the field. If it is the harvesting or plantation time which requires more number of labors, loosing a family member at that time could be a great loss. Specially some activities in rice cultivation are strictly divided on the basis of gender like plantation, which is exclusively a women's domain in lower part of Assam.

As Thingring Narzary(daughter-in-law, marginal category, 34 years) states

"I had malaria last July and I was bed ridden for almost one week .I couldn't go to the field .It was a great loss for us. So as soon as I got well I started working in the field".

Sobita Basumatary(daughter-in-law, middle category, 24 years of age) Her brother-in-law had malaria in the month of October, which is neither a month of sowing nor a harvesting month.

"My brother-in-law is a malaria patient. Fortunately he didn't have malaria at the time of plantation or harvesting, or it would have been difficult for us to manage the work in the field. And we wouldn't have been able to take care of him properly. Managing field work along with taking care of him would have been a bit difficult".

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Although agricultural laborers are an option but agricultural laborers are only hired as a replacement rather then as a help. So when ever a member is not able to work in the field agricultural laborer would only be hired to replace her. The other options available in case a family member is suffering from malaria is to give the land on *Adi(*Sharing basis). Thus in case of Somila Basumatary whose husband died few years back ,it was a struggle to cultivate her field this time as she is a suspected case of malaria .

Somila Basumatary (aged 34,wife,marginal catagory)

"Every year I along with my daughters and son cultivate our land .My son holds the plough and I along with my daughters plant the sapling. But this year I had viral fever along with headache and my face and feet got swollen. I has …..bighas of land which my daughters and son can't manage, for these reason I had given my land on Adi (sharing basis) .Owing to my health I can't even take care of my land this time. It was a great loss for us this time".

However, this is not a common practice in the village as; according to the villagers giving the land on *Adi* is the last option, since it is not financially viable through out the year.

But in case a woman is suffering from malaria with clinical sign and symptoms or is suffering from diarrhea, dysentery, fever, skin rash which comes under suspect case of malaria as according to the categorization made in previous chapter, she will be replaced by agricultural laborer. As Georema Brahma (29 aged, wife, and upper catagory) narrates

"I had fever, running nose, and felt very week after the fever episode along with body pain. I was given medicines from the local medical shop. I was at bed rest for four days .As sowing was mainly my responsibility and my daughter alone can't do everything so my brother got a women to work in the field".

In case she has joint pains, body ache, running nose she has to continue working in the field .For them joint pains, body ache, running nose are considered as normal. But again hiring agricultural laborer is not possible for everyone owing to their class back ground. As explicitly explained by Nomita Basumatary (25 aged, daughter-in-law, marginal strata)

"I feel quite weak very often , I even fainted once. So when ever I feel weak, I take rest . From next day again I had to go to the field for harvesting. Since it is harvesting season I can't take rest more then that and we don't have so much money to hire any one to work in our field".

4.1.3Women working outside their Home

However being a malaria patient means, not only losing the household chores rather it also affects on their work that they do, other then their household chores .These activities gives them use value. However the impact of malaria on the respondents in terms of their work other then their household chores is only visible when they consider themselves as ill. Thus Weakness, body pain, joint pain are not considered as serious enough either to be consulted to the doctor or to miss their work that gives them financial benefits. As Banchi Basumatary(46 aged, wife, marginal category) comments

"I have respiratory problem with body and joint pains. I would take rest when ever I feel weak. When ever I have body pain, I would ask her daughter to give a body massage. I didn't go to the doctor because I don't think it is any serious problem and we go to the doctor only when someone is suffering from fever, diarrhea, dysentery, or have broken any bone".(She was tested positive in the health camp that was organized after the malarial death)

The same feeling was echoed by Teleb Daimary(41 aged, medium category, wife)

"I feel weak quite often, so when ever I feel weak I take rest. But that doesn't affect me much as I am quite used to this weakness. Weakness is not a medical problem."

Consequently, they didn't lose their work, Banachi Basumatary who sells fish in the local market never stops going to the market owing to her respiratory problem. Similarly Teleb Daimary who sells home grown vegetables in the local market never leaves behind her work owing to her weakness.

But respondents suffering from symptoms like fevers , head ache, swollen face and feet had to loose their work. As Somila Basumatary who had viral fever along with headache and her face and feet's got swollen. She couldn't go to her tea stall which was again managed by her son and daughters. She narrates that

"I was completely bed ridden with fever .My face and feet was swollen .I couldn't go to the tea stall my son managed it during those days. Normally I manage the stall with my son and daughter but during that time he managed it alone. My daughters were at home taking care of me".

4.2Women as Care givers

However malaria patient requires care giving at home also these includes giving medicines to the patient, serving food, and replacing the patient in household chores or in the farm. And this is exclusively women's domain. But in doing so, their household work, their work in field, their work outside their household gets affected.

4.2.1Domestic work

When ever a wife is suffering with malaria, her daughter-in-law or her daughter will take care of her. Similarly a daughter-in-law will be taken care off either by her unmarried sister-in-law or any other female members. Balen (daughter-in-law,aged 19, medium category) states how her sister-in-law took care of her.

"My sister-in-law got malaria in last july. After she suffered from high fever with chills and vomiting for three days, she was taken to Runikhata Sub centre. From their she was referred to J.S.B civil hospital Kajalgaon, where she was conducted blood test and found Pf positive. She was admitted in the hospital for three days and in those three days her daily duties of cooking and plastering of house cleaning and washing were done by me . After she came home she rested for three days and soon after that she resumed her duties. Although my mother-in law is also present, but it's only the daughter-in law who has to do the household chores. In fact, when she was at hospital her food would be cooked by me and I would travel all the way to the hospital to give me food" .

Anjima's sister-in-law's duties towards her come under her role expectation. It is her socialization that makes her full fills those role expectations. She replaced her sister-in-law in the household chores along with that she cooked food for Anjama and traveled all the way to the hospital to serve food, despite the presence of her father-in-law and two brothers-in-laws.

And in case there is no other female members in the family, the husband will take care, but only till the time another female member is called off to replace her. Narrating this Asha (wife, aged 34 ,upper category) says

"I had malaria and after one day my treatment was initiated ,my husband used to cook and do all other household chores like cleaning the utensils and cleaning the room. In the meantime my unmarried sister-in-law, who lives in the nearby town along with my in laws was called off .After she came over, she cooked and did all the household chores

like cooking ,cleaning the utensils, cleaning the house, sweeping the courtyard, washing the clothes".

However, the household chores done by the husband is not as elaborate as her sister-in-law like he didn't wash clothes, it was left for the sister-in-law. Even the cooking wouldn't that so elaborate.

Although care giving is exclusively women's domain but, it also depends upon the relation with the patient. Thus a wife ,who doesn't do any household chores however will be taking care of the patient provided ,the patient is her children. So taking care of the children is primarily a mother's responsibility. As Sobita Basumatary (daughter-in-law,21years old, marginal) narrates

"My brother-in-law is suffering from malaria, but taking care of my brother-in-law is primarily my mother-in-law's responsibility .She will give him sponge bath ,she will give him medicine and food. When ever she is at home she will constantly sit at his side. When ever he needs anything she will give him. I only look after him when my mother –in –law goes to the local market to sell the vegetables".

The above quote also implies that the women as a care giver may not have to lose their domestic work ,if she has a replacement at her home. So for Sobita her household chores were not much affected by her brother-in-laws illness. This also means that a women can let off her household chores provided she had a replacement in the form of daughter or any other female members. As Nilima Basumatary(wife,34 years old, marginal category) tells

"My son had malaria in the month of July. I had to take care of my son. Give him medicines that were given to him by the local medical shop. My son experienced headache so when ever he used to have headache I used to give him a head message, many times leaving my household chores. My daughter would do all the household chores".

But in single women household nursing a malaria patient could not only affect her household chores but also her work in the field and her work outside her home as well gets affected. As Anita (27 years, Wife, Marginal category), who lost her daughter to malaria, narrates her experience

"*My day normally begins at 4 in the morning ,I have to wake up before everyone ,clean the house. Then we will have the left over rice from the previous night as our breakfast. After that I have to do other household chores like cleaning the utensils, washing clothes, preparing food, along with all these I had to take care of my twine daughters also. My daughter had malaria, this July; she was suffering from high fever along with chills for five days. We first took medicine from the local medical shop ,but that didn't work. She used to cry at night. I had to be awake with her through out the night .Even I used to feel weak in the morning. It was very tiring for me. When her condition deteriorated, we took her to Runikhata State Dispensary .From there she was referred to Kokrakjar Civil hospital. I had other twine daughters .They are just one year old. I had left them with our neighbors. We were lost in the hospital. We didn't know where to go in the hospital initially. Then somehow we went to the doctor. She was then admitted in the civil hospital.The whole thing was so tiring for me. I was feeling very week infact I vomited in the hospital .Despite of all these we couldn't save our daughter .She died in the night. We even took loan for her treatment. We had to hire a vehicle to take her to Runikhata. For repayment of the loan we had to sell of a piece of our land"*.

Experience of such type of physical exertion and fatigue is quite common among women whose family members had malaria with clinical sign and symptoms along with that, who had fever, or who are bed ridden with any sign and symptoms that could be clubbed as suspected cases of malaria. As Rohima Borgoyari(wife,26 years old, marginal category) whose husband gets fever every night narrates that

"*I prepare and sell rice beer at my home. For the past few days my husband has been suffering from fever. As I am the daughter-in-law of the house, I have to do all the household chores along with selling the rice beer. Whenever my husband gets fever I*

have to at his side, sometimes giving him body massage, or giving him water, simultaneous I had to take care of my business as well and I had to prepare dinner along with all these. For my husband's illness some times I had to wind up my business early. When ever he gets fever he couldn't sleep for whole of the night and I have to be awake for whole of the night. Sometimes I could only sleep for half an hour. But I have to get up at 4 in the morning and start doing my household chores. At the end of the day I feel body ache".

Their time for afternoon nap is also absorbed for care giving. As Geeta Baumaraty(wife,aged18, marginal category) whose daughter and mother-in-law both were tested positive with malaria ,narrates that

"My mother –in-law had high fever with skin rashes, initially we thought that It was just fever and she will be fine within few days. As I am the only daughter-in-law, so I had to take care of her. Along with all the household chores I had to take care of her as well. I had prepared some home remedies for her skin rashes. Which I used to apply on her in the afternoon after I am done with all my household chores .I couldn't sleep in the afternoon as I had to apply that medicine on her then I had to give a sponge bath to her".

4.2.2Women's work in the field

As women's work in the field is compulsory, but taking care of a patient might lead to losing of their work in the field or it might add to their burden along with their household chores .However as mentioned earlier, women's work in the field among all the agricultural process mainly involves sowing and other process after harvesting. Thus the time of disease is important in assessing their work burden. As women are expected to do all these activities thus number of women in the household definitely influences the work burden of the women. As Anita (27 years,Wife,Marginal category) who lost her daughter to malaria narrates how she was unable to give time to her field work as well as to her ailing daughter. Her daughter had malaria this July, which also is the month when rice cultivation begins in the field.

"My daughter was suffering from malaria this July. It was the month of sowing and I had to do the sowing alone as I am the only female member in my family. I had keep my daughter alone at home but when ever my daughter used to get fever she would cry and I had to run to her .For these neither I could work properly in my field nor I could attend to her .For these reason we couldn't take her to the doctor on time. How can I leave my field work ,we don't have that much money .Our whole years earning depends on the rice cultivation of these months . I can't afford to lose my work in the field".

In an agrarian society where family is the only source of labour, losing any family member's labour itself is vital but to add on to that losing another family member for taking care of the ailing member could be detrimental.

As Nilima Borgoyari (wife,34 years old, marginal category) recounts

"Both of my son and daughter had malaria. My daughter had malaria at the time of Bohag Bihu (in the month of April) where as my son had malaria during sowing time(in the month of June- July). I had to take care of my son. Give him medicines that were given to him by the local medical shop. My son experienced headache so when ever he used to have headache I used to give him a head message The fever got relapsed every now and then and along with that he gets nausea and vomiting also, so when ever he felt puckish, he needs to be taken out, then cleaning also becomes problematic. My son gets fever at night so sometimes I had to be awake all the time. When ever he gets fever with chills I had to get up at night to give warm cloths. so she had to take her son to the medical shop. For this I can't allot time to the agricultural land which I was forced to give my land on Adi(sharing basis).Adi is a great loss for us .We have to give away half of our crop. This is our main source of income. Sickness of any member at this time is quite damaging. I wish we had that much money to hire an agricultural laborer".

Thus a mother is responsible to take care of her children provided that children are unmarried. However a married son will be looked after by his wife under the supervision

of her mother-in-law. As Halflong Basumatary(wife,59 years ,medium category) narrates

"After the first rain we had to prepare the field for sowing. During that time my son had puffed face and swollen legs .My younger son took him to the local medical shop. But at home my daughter-in-law had to take care of him. But I have to make sure that he gets everything as soon as possible. He is the elder son of the family he has to get well soon. Or we will be late for sowing".

But again hiring agricultural laborer is not possible for people belong to the lower strata of people. This leads to increasing of burden on the women who replaced her in the field. For Balen(19, daughter –in-law, medium category) who had to replace her sister-in-law in the field.

"Usually I along with my sister-in-law and mother-in-law do the sowing but my sister-in-law was suffering from malaria; she was admitted in the hospital. As it was the time of sowing time and we can't stop our work. And we can't hire agricultural laborer. So I along with my mother-in-law had to do the entire sowing. My mother-in-law is very old so I had to do the maximum sowing. It was very tiring for me I had back ache. I had to prepare food, do all the household chores alone".

Their inability to lose a day's work many a time leads to blurring of the gender division of labor in the field. Thus preparing the field for sowing, which is strictly a man's domain quite sometime is replaced by female as well. As Maino Narzary (aged 14 , daughter, medium category) whose mother and brother had malaria in the month of July expressed how she replaced her brother in the field.

Both my brother and mother had malaria simultaneously and there was no one who could prepare the field for sowing. So I prepared the field .I plough the field for sowing .Then I sow the seed in the field before that I also prepared the seed for sowing. Although all these are suppose to be done by my brother. And for that I had to lose my school for few days.

Similarly for Ukha and Nashila Basumatary(daughter, 13 and 15 years marginal category) ,small also replacing their father in the field was not a very difficult.

Both of us know plouging .So when our father couldn't come to the field owing to his illness, both of us did the plouging alternatively .Even we sowed the seed also.

However, it is quite unlikely that for a daughter-in-law to invade the territory meant for male. It is either a daughter's or a wife's responsibility to replace the male member of their family.

As mentioned earlier, losing agricultural work mainly depends upon the relation of the care giver with the patient. And agriculture being the main source of income for them so agricultural work is not lost unless the patient is bed ridden. So many of the care givers whose family members are not bed ridden, didn't have to lose a days work. As Phuleshwari Narzary(wife, aged 51 upper category) narrates:

"*At the time of sowing my daughter-in-law had high fever and weakness. As we work in the rain, so fever is quite common .She also complained of weakness but we all have weakness. We can't stop our work just because of weakness. My son got some medicine from the medical shop and she continued with her work in the field. If we don't work during this time, what we will eat for the whole year?"*

4.2.3 Women working out side their home

Women's work as a care giver also affects their work outside their home. These women work outside their home to substantiate their family's income. Some of them run their own business with family's assistance where as some of them works without any families help. However to fulfill their role as a care giver, these women have to loose their work outside their home. But as mentioned earlier these works are mainly done by wife of the house, so losing their work totally depends upon their relation with their family. Thus

Nilima Borgoyari(wife,34 years old, marginal catagory) who son had malaria how couldn't open her teal stall in the local market.

"*My son had malaria during the sowing time. He had high fever along with chills .He used to vomit also .So I have to be at home to take care of him. I have a daughter but see can't take care of her brother .She is younger then him .She did all the household chores. I took him to the doctor, gave him medicines. For these I couldn't open the tea stall"*.

Some of them have to wind up their business early to take care of their family members. Like Dandhi Brahma (31 years, wife, marginal category) had to wind up her business at least 2 hours earlier then usual ,to take care of her husband.

"*My husband gets high fever every night. And I start my business after dusk. So when ever he gets fever I had to wind up my business early. Obviously I am losing considerable amount of money for his illness"*.

However all women doesn't have to lose their work outside their home owing to their family member's sickness. As Halflong Narzary (59 years, wife, marginal category) recounts

"*My grand son had malaria. Her mother took care of him; I only replaced her mother, when she was busy with her household chores. As household chores is mainly her responsibility. So I would sit next to my grand son fan him , give him medicines only for that period of time. So after her household chores in the afternoon, I had to go to the local market to sell home grown vegetables"*.

As (56 years wife Saotali Bargayary, marginal catagory) who sells fish in the local market narrates that

"I had to go for fishing every day as I sell fish in the evening market. When my grand son had malaria I couldn't do much. My daughter-in-law took care of him .When ever she had to do the household chores any of the family members, who ever is at home, look after the child. So when I was at home, I gave him sponge bath, sometimes feed him also. But I could only take care of him for certain period of time as I have to go for fishing every morning. So I could only took care of him once I came back more over when I used to go the market his mother was done with her household chores so she took care of the child."

4.3Health seeking behavior

Women who had malaria in Dynama village quintessentially suffered from fever along with rigger, headache and vomiting. As mentioned earlier, "fever" being very common in this region, the initial recognition of the symptoms is delayed by three to four days. Even when it is recognized as fever, the first level of contact is the local medical shop(40% of respondents) .Followed by mobile medical clinic (30%). Although there is a sub centre at 6km from the village, still people prefer to go to the local medical shop. This feature is quite common among all strata of people mainly because they can go to the local shop at any point of time unlike the sub centre which has the time restriction. Along with that it is their flexibility of payment; they can pay when ever they have cash .Rather it is not compulsory to pay in cash they can pay in kind as in rice, or home grown vegetables or pork. More so the respondents don't feel comfortable that the ANM's husband (who stays in the subcentre) is always drunk.

As Somila Basumatary states

"I had fever running nose and body pain. I went to the subcentre along with one of my female relatives. The ANM was not their, her husband was totally drunk .We didn't feel comfortable to talk to him."

The same experience was echoed by Geeta Basumatary (Daughter-in-law, marginal strata)

"When my daughter had malaria, I took her to the ANM, as some body told me that we can get free medicines from their. But when I went their along with my daughter, the ANM was not their. Her husband told us that she went for some training .But he was so drunk that he couldn't stand properly .I didn't like his behavior. And I have decided that I will never go to the Sub centre ever."

Their second level of contact is either Runikhata State Dispensary(33%) or a Dr Jatin Brahma's private clinic(50%) in the near by town. When enquired about these diverse choices, it came out that for second level of contact they would prefer the Runikhata state dispensary. Their preference for Runuikhata State Dispensary is because it gives free medicines. But sometimes it is non availability of the doctor in the emergency that forces them to go for that private clinic. As Miasri Daimary(aged 24,daughter-in-law medium category)tells how her 14 month old child who was suffering from malaria had to be taken to a private clinic due to non availability of doctors at the State Dispensary.

"My 14 month old son had malaria ,we initially took some medicines from the local medical shops ,but when it didn't work, we thought of taking him to the Bangtol CHC but when we reached their at around 9 in the morning. We couldn't find any doctor their .For this we had to go Dr Jatin Brahma's Private clinic. We hired a private vehicle to go to Bangtol but we had to pay him more as we went further to Chapaguri."

Although there are other private clinics in the nearby town or other government health service systems like the Runikhata State Dispensary but their preference for the particular doctor is governed by their ethnicity. The doctor being a Bodo is most preferred among the villagers. Even if all section of the villagers go to the private clinic but, to avail the services at a private clinic costs heavily on some people. Like Lepsi Borgoyari (aged 24,daughter-in-law marginal category) states that:

"I had malaria in the month of June. After treatment from the local medical shops, I was taken to the Runikhata hospital at 7 am , when we couldn't find any doctor their I was taken to Dr Jatin Brahma's private clinic. I was tested positive for malaria, I

was given medicines and I was brought back home. This treatment cost us heavily. We had to hire vehicle to reach the hospital plus the doctors' fee and for all these, we had to sell off my gold jewellary along with six pigs."

But for some people in the same village even getting the doctor at home is not impossible as Asha (aged 34, wife upper catagory) narrates

"*I had malaria and my treatment was initiated after one day. My husband got a doctor at home .We had to pay for his home visit which is higher then his regular visit."*

These experiences of the women represent the insensitivity of our health service systems towards the people. Only establishing a health institution is not a solution to any health problem rather there are host of other factors that affect the utilization of the services. In the absence of efficient functioning of the government health services, people had to move towards private provider .But to availing these services which leads to further pauperization.

As Anitha Narzary(27 years,Wife, marginal category) narrates:

"*My daughter had malaria and she was initialed treated at the local medical shop, but when her condition didn't improve we had to take her to Runikhata State Dispensary from their she was referred to Kokrajhar Civil Hospital. For her treatment and for transportation we had to take loan, which we repaid by selling off some portion of our land."*

Thus the health seeking behavior of the respondents are govern by many factors ranging from flexibility of payment to ethnicity .One of the thing that came out in the narration of these women is that behavior of the health personals are big motivating factors in motivating people to seek health care from a particular institution.

Chapter 5

Discussion and conclusion

The present study tries to examine the relation of women's work and its socio-economic impact on malaria, among the Bodo tribal women of Assam. Women's work in this region constitutes their household chores, their work in the field and their work outside their houses. The study aimed at reviewing how being a malaria patient, these three spheres of her work gets affected. Further the study also dealt with the women's experience of being a care giver to their family members, who were suffering from malaria in the last one year. Thus trying to explain how gender role and socialization influences their work and health.

5.1Methodology-

The study was conducted in Dynama Village of BTAD(Bodo Territorial Autonomous District) Assam. The reason for selection of the particular village was that, it reported a malarial death in the year 2011 along with that it had hundred percent Bodo population. The research question which was framed after the literature review tried to look into the consequences of malaria on Bodo women in the backdrop of persistent structural inequalities of class and gender. The research question also tries to find out factors that facilitates or hinders their health seeking behaviour.

To understand the impact of malaria on the lives of the Bodo women of the region qualitative research method was employed. The study was conducted in two phases .The first phase was conducted in the month of October, which included the selection of the village, identifying the respondent and rapport building, and pre-testing of the tool. The second phase which was conducted in the month of November to December included in depth interviews through interview guide.

The village record revealed that Dynama village has 39 household and all of them were peasant household with agriculture as their primary occupation. Thus land holding was considered as a basis of categorization. According to the agricultural census the

whole village was divided into three categories. Marginal-land holdings below 1 hectare ,Small- 1-2 hectare, Semi-medium-. 2-4 hectare . There are 18 households in the Marginal group, the Small group comprises of 11 households and Semi- medium group consist of 10 households

Further women were divided according to their relation with the head of the family. Based on this there were three sets of women- wife, daughter-in-law and daughter.

5.2Gender Division of labour

Women's work was basically divided into household chores, women's work in the field and women working outside their home. Daughter-in-laws have to take the entire burden of the household chores even though their mother-in-laws are there. When asked about it, it was told that as a daughter-in-law it is expected from her and she has to fulfill those expectations. Thus gender defines the role and expectation from the member of the societies and being a part of the particular society the member have to fulfill their role expectations. In case there are two sister-in-laws it is easier to share the household chores. For upper strata families having only one female member, it is quite common for them to make a woman relative stay with them to help her in household chores.

For mothers having daughters, it is always easier to manage the household chores; their sharing of household chores gives them an opportunity to work outside their home, which adds to their family income. Daughters only assist either their mothers or their sister-in-laws. So the role of family as an institution for socialization of young members of the society comes into play. Family is the institutions that start shaping the gender identity of its members, preparing them for the role that the society expects from them. Thus being a part of a patriarchal and patrilineal society, it is expected that household chores is exclusively women's domain and young members of the society are expected to be socialized in these way .Family being the first institution for socialization, introduces its members to their gender role. So the burden of household chores basically depends upon relation with the patriarch.

However a distinct class differential could be seen among women working outside their house as maximum respondents reported doing work outside household are from lower strata .The total respondents working outside their home are 11 out of which 7 are from lower strata, 2 are from middle strata, 2 are from upper strata. Here also relation with the patriarch is quite important to define who works outside the house ,as household chores are mainly daughter-in-laws duty similarly it is mainly the wife of the house who goes outside the house to work.

As the study was conducted in an agrarian society so irrespective of their class background all the members in the family work in the field. In fact it is a tradition that a married woman is supposed to plant the first sapling in the field. Here again, gender defines the roles of the women in the field. Women's burden is not only dependent on the gender role rather it is also depends upon the size of the land also thus a clear interaction of class and gender could be seen when a women from an upper class had to plant the saplings single handedly.

5.3Women's experience of being a malaria patient

For respondents who had malaria with clinical sign and symptoms their household chores were done by some female relatives, either by daughters or by unmarried / married sister-in-laws or any other female relatives who can be summoned to replace her in the household chores . Thus, it is always believed in the Bodo society that household chores are exclusively women's domain and it is always socially expected that a women relative will replace her in her household chores .This expectation not only defines the roles of the women when she is sick rather this role expectation also forces her to take up her household chores as soon as her clinically manifested sign and symptoms are gone. The burden of the role expectation certainly depends upon the number of female members in the family. As household chores are mainly daughter-in-laws responsibility, so incase she is suffering from malaria these role expectations are more evident for her.

Bonilla et al cited in Vlassoff (1994) also states that when ever the women is suffering from malaria ,it is expected from her that she will catch up with her duties in

her recovery period itself. But it does not specify whether this role expectation is same for all the women or it has any relation with the patriarch.

So far as working in the field is concern, hiring a replacement depends on the economic strata. So it is only possible for upper category people to hire agricultural labourer, even agricultural laborers are not hired as help rather they are employed as a replacements. For respondents who are suspected cases of malaria, they can take rest from their work in the field for some times but they can't leave their household chores unattended as her in- laws won't like it. Thus gender role expectation not only defines their work rather it also classifies when she is allowed to rest.

As it is mainly the women of lower category who works outside their houses and their work outside their house is with a hope to improve their economic condition. And in case any of them suffers from malaria, it is a great economic loss. But as in the above two categories, her jobs always gets a replacement from any other female members but here she does gets any replacement. The possible reason could be again located in the gender role discrimination, where women's work outside their house is considered as a supplementary.

5.4 Women as Care givers

Among all the cases, women were the care givers. So, for respondents whose family members had malaria, their work burden doesn't increase in the terms of cooking and cleaning. But it increased in terms of looking after the patient, which includes nursing the patient, giving medicines, giving water and fanning the patient, staying awake with the patient and taking out the patient whenever he/she feels like throwing up.

Care- giving exclusively being a women's domain has been stated by The Roll Back Malaria report (2006) .Even Bhatiya(2002) cited Time Used Survey conducted by Central Statistical Organization between July 1998 and June 1999 across six states showed that women uses maximum of their time in extended-SNA that includes care for sick and old .Even three studies conducted by CEHAT showed that women working

outside their house have to shoulder triple burden of economic activity , household chores, and care giving. Similarly, Shimra, (2004) study on Tankul Naga showed that household chores and care giving is exclusively women's work. The author used Time Used Survey, which was remodeled according to Tankul Naga society to women are the exclusive care giver in the society. However this unique feature of women irrespective of caste or tribal society, could be seen in the realm of ethics and morals, as emphasized by the Care -Focused feminists.(.Tong,2009) But emphasizing too much on morals and ethics will make it appear as an individualistic issue where the focus will be on the personal and familial relation of the individual. Moreover linking women with caring runs the risk of portraying women as a natural care giver, a quality that comes to them naturally or a view that says that because women can and have cared so they should care for others irrespective of the present situation. This type of view doesn't takes into consideration the socialization process of the individual that shapes the ideas, ethics and morals of the individual .The ethics, morals are shared values of the a particular society and every member of a particular society are socialized in a way that they aspire to achieve those shared values.

Further as women's work is not confined to household only rather they include work outside their houses. So women's work outside their house also gets affected owing to their role as a care giver. For women who have a female relative at home who can replace them for their household chores or who can replace her for a certain period of time as the care giver in those households it is possible for women to continue working outside home despite a family member being ill with malaria.. Thus size of the family and relation with the patient is important in assessing the burden of care giving on their work outside their house. This pattern is also visible on their work in the field. As the agrarian work in the region is largely dependent on family labour so time of onset of disease and number of female members along with position in the family is very important to asses the impact on their work. If it is the month of plantation or harvesting of rice the work burden will be more .If there is only one female member in the family then again she had to bear the burden more as compared to her counterparts who are in joint families. If the respondent is daughter-in-law who has to do all the household chores

and in case her husband or her children is suffering with malaria, then she had to do bear the burden alone.

Infact some of these findings were also established by Roll Back Malaria Report (2006)and Bonilla et al cited in Vlassoff (1999), where it is stated that in rural Colombia illness of adult male members increases the work burden of the women and replacing the sick female member is also the responsibility of the female relatives. However the report stated that economic activities were also replaced by the female members of the family, but this was quite contrary to the findings in the present study where replacement was only called for in the household activities and in agricultural work. But the reviewed literature missed on the intersectionality that operates in the lives of the women. Factors like the number of female members in the family, relation with the head of the family, and time of the onset of the disease do influences their work burden.

5.5 Health seeking behavior

As fever is quite common thing, so any case reporting with fever generally reports after 3-4 days of onset of the disease. Weakness among women is also quite common but that is not considered as a sign of disease, even the women also feels that weakness is not a sign of disease. This reason could be attributed to the fact that malaria in endemic zone can imitate the symptoms of other disease.

Reporting with fever differs from 1 day to 5 day, reason- as fever is quite common in the region ,so it was thought initially that it might get well in 2 -3 days. Even after realizing that the patient needs medical attention, for people belonging to lower strata, they had to arrange money which is quite difficult for them that adds to the delay. The cost of treatment is quite heavy on many families as in many cases they had to either sell of their cattle or their land or their gold jewelry to meet the expanses of treating at the private hospital.

The respondent's perception about their own health depends on their capacity to work so as long as the patient is not bed ridden, she /he is not considered as sick.

Consequently, they don't need any special care like for those who are bed ridden, because other jobs are equally important, therefore as long as a person is not bed ridden no special care is needed. This explanation can also hold true to for low ratio of passive surveillance for Sidli PHC. Passive surveillance includes case detections that are self reported.

In Vlassoff and Bonilla(1994) ; Vlassoff et al., (1995); Khattab (1993) cited in Tanner and Vlassoff(1998) ; Tolhurst, R et al (2002) women prefer traditional healer due to various reasons like their inability to miss their domestic tasks , walking long distance for medical practitioner and possibly disappointment in the medical practitioner or medicines are not available along with young single women are particularly too embarrassed to seek assistance from a male physician and this was associated with predominance of male attendees. A similar kind of findings were reflected in the present study where the The first level of contact for the villages is the local medical shops. The reason for that is the distance from the nearest subcentre which is 3 kms away from the village and as mentioned earlier, the village doesn't have any transport facilities. Secondly, they can go to the local medical shop at any point of time without any time restrictions. Thirdly, it is their flexibility of payment; they can pay when ever they have money .Rather it is not compulsory to pay in cash infact they can pay in kind as in rice, or home grown vegetables or pork. Fourthly, the respondents don't feel comfortable that the ANM's husband (who stays in the sub centre) is always drunk.

5.6 Conclusion

The present study tried to examine the socio-economic impact of malaria among the Bodo tribal women of Assam. While conducting the study it came out that the relevant literature for malaria only focus on the medical aspect of the disease ,infact an idea of consequences of malaria was only limited to economic aspect. But theses studies are some how presented a gender blind explanation of the consequences of malaria. Thus a need was felt to explore the socio-economic aspect of malaria. The varied consequence of malaria that makes the experience different according to their sex was studied here. Even within the gender how structural factors like patriarchy plays its part to further

differentiate in the consequences was tried to capture here. As mentioned by WHO the health is not merely the absence of disease rather it encompasses physical, social and mental well being. This definition gives regards to the societal factor that does influence one's health. Thus it was felt that, this study could be further incorporate a new dimension of conflict as the study area has witnessed ethnic violence for the past few years.

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A.1. 4: State-wise Number of Malaria Cases and Deaths in India (1998 to 2003)												
	1998		1999		2000		2001		2002		2003	
States/UTs	Posi-tive Cases	Death	Posi-tive Cases	Death	Posi-tive Cases	Death	Posi-tive Cases	Death	Posi-tive Cases	Death	Posi-tive Cases	Death
Andhra Pradesh	118800	12	129020	11	80557	6	57735	1	38053	0	35995	3
Arunachal Pradesh	49554	2	58243	1	46165	0	56030	14	46431	0	34810	0
Assam	94645	34	131048	111	84915	43	95142	122	89601	72	76570	53
Bihar	114958	34	131898	131	9509	2	4108	0	3683	2	2652	1
Chhatisgarh	-	-	-	-	359155	63	290666	32	235434	3	194419	4
Goa	25975	19	15380	17	9164	11	12331	12	16818	15	11370	1
Gujarat	100825	3	64130	7	36712	2	81347	19	82966	17	130744	65
Haryana	12115	0	2604	0	1050	0	1202	0	936	0	4374	0
Himachal Pradesh	1433	0	700	0	491	0	349	0	176	0	133	0
Jammu & Kashmir	5451	0	3574	0	3045	0	912	0	455	0	320	0
Jharkhand	-	-	-	-	133453	16	130784	21	126589	31	118902	13
Karnataka	118712	3	97274	11	109118	14	197625	21	132584	33	100220	22
Kerala	7431	7	5141	7	2940	9	2289	9	3360	8	2575	7
Madhya Pradesh	475098	26	527510	50	194689	93	183118	81	108818	30	99708	22
Maharashtra	165985	32	137712	46	81406	40	56043	50	45568	43	62947	85
Manipur	1306	1	2662	8	1064	0	943	5	1268	9	2589	17
Meghalaya	17618	2	14798	5	13699	11	20630	17	17918	41	18366	38
Mizoram	10137	56	14437	73	9059	33	10929	43	7859	35	7293	48
Nagaland	1989	0	4396	12	3443	0	4318	1	3945	0	3370	0
Orissa	478056	349	483095	399	509497	467	454541	305	473223	465	421323	333
Punjab	5316	0	1113	0	483	1	604	0	250	0	379	1
Rajasthan	76438	0	53154	0	35973	10	129233	36	68627	11	142738	66
Sikkim	15	0	14	0	16	0	31	0	53	0	278	0
Tamil Nadu	63915	2	56366	2	43053	1	31551	0	34523	0	43604	0
Tripura	14408	5	14408	11	12245	6	18502	9	13319	5	13807	13
Uttaranchal	-	-	-	-	2008	0	1196	0	1659	0	2350	0
Uttar Pradesh	112291	0	99632	0	96971	0	94524	15	90199	0	101411	0
West Bengal	132088	-	227480	144	145322	103	145053	191	194421	152	233802	214
Andaman & Nicobar Islands	1247	0	937	2	1002	1	925	1	865	1	753	0
Chandigarh	1675	0	456	0	256	0	298	0	157	0	84	0
Dadra & Nagar Haveli	6225	0	3303	0	2415	0	848	0	493	0	468	0
Daman & Diu	625	0	352	0	132	0	87	0	173	0	141	0
Delhi	4050	0	3996	0	2631	0	1484	0	1484	0	839	0
Lakshadweep	4	0	1	0	5	0	0	0	8	0	6	0
Pondicherry	168	0	149	0	137	0	106	0	103	0	63	0
India	**2222748**	**879**	**2284713**	**1048**	**2031790**	**932**	**2085484**	**1005**	**1842019**	**973**	**1869403**	**1006**

Source: Ministry of Health and Family Welfare, available at indiastat.com. Accessed on 6/8/2011

A.1.5: State-wise Number of Malaria Cases and Deaths in India (2004 to 2010)														
States/UTs	2004		2005		2006		2007		2008		2009		2010 (Up to Nov. 2010)	
	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death
Andhra Pradesh	7	2	39099	0	34081	7	27803	2	26165	0	25152	3	31095	20
Arunachal Pradesh	29849	0	31215	0	39182	0	32072	36	28072	6	22066	15	15337	0
Assam	58134	54	67885	113	126178	196	94853	152	83869	86	91413	63	57969	34
Bihar	1872	0	2733	1	2744	304	1595	1	496	1	3255	21	1149	3
Chhattisgarh	194256	4	187950	3	190590	1	147525	0	123495	0	129397	11	118500	32
Goa	7839	7	3747	1	5010	3	9755	11	9822	21	5056	10	2186	1
Gujarat	222759	89	179023	54	89835	7	71121	73	50884	36	45902	34	58996	9
Haryana	10064	0	33262	0	47142	45	30895	0	35683	0	30168	0	9610	0
Himachal Pradesh	126	0	129	0	114	0	104	0	144	0	192	0	197	0
Jammu Kashmir	250	0	268	0	164	0	240	1	200	1	346	0	718	0
Jharkhand	143722	40	193144	21	193888	4	184878	31	212496	25	230683	28	173891	13
Karnataka	80961	27	83181	26	62842	32	49355	18	47162	7	36859	0	41861	11
Kerala	2790	12	2554	6	2131	6	1927	6	1804	3	2046	5	2162	4
Madhya Pradesh	132094	36	104317	44	96160	56	90829	41	105265	0	87628	26	80094	0
Maharashtra	68988	61	47608	104	54420	133	67850	182	67321	164	93818	227	124860	162
Manipur	2736	8	1844	3	2709	8	1194	4	708	2	1069	1	890	4
Meghalaya	18080	29	16816	41	29924	167	36337	237	38210	73	76759	192	40180	82
Mizoram	7830	72	10741	74	10668	120	6081	75	7306	91	9399	119	15061	22
Nagaland	2486	1	2987	0	3361	75	4976	26	5674	0	8489	35	4736	5
Orissa	416732	283	396573	255	380216	257	371879	221	359619	218	380904	198	328767	203
Punjab	1643	0	1883	0	1888	0	2017	0	2494	0	2955	0	3369	0
Rajasthan	105022	20	52286	22	99529	58	55043	46	57482	54	32709	18	47054	26
Sikkim	160	3	69	0	93	0	48	0	38	0	42	1	47	0
Tamil Nadu	41732	0	39678	0	28219	0	22389	1	27373	0	14988	1	14102	1
Tripura	17453	16	18008	20	23375	31	18474	51	25451	46	24430	62	22926	8
Uttarakhand	1255	0	1242	0	1108	0	953	0	1059	0	1264	0	1599	0
Uttar Pradesh	87022	0	105303	0	91566	0	82538	0	93383	0	55437	0	59114	0
West Bengal	220871	184	185964	175	159646	203	87754	96	104757	101	141211	74	108180	38
Andaman Nicobar	745	1	3954	0	2993	1	3973	0	4688	0	5760	0	2377	0
Chandigarh	199	0	432	0	449	0	340	0	347	0	430	0	347	0
Dadra Nagar Haveli	787	0	1166	0	3786	0	3780	0	3037	0	3408	0	5339	0
Daman Diu	118	0	104	0	140	0	99	0	110	0	97	0	194	0
Delhi	1316	0	1133	0	928	0	182	0	253	0	169	0	250	0
Lakshadweep	2	0	0	0	0	0	0	0	0	0	8	0	6	0
Puducherry	43	0	44	0	50	0	68	0	72	0	65	0	154	0
India	1915363	949	1816342	963	178529	1707	2E+06	1311	1524939	935	1563574	1144	1E+06	678

Source : Ministry of Health and Family Welfare, available at indiastat.com. accessed on 6 /8/2011

Annexure 1

A.1.1: Malaria Report ,Sidli PHC

		Active survillance				Passive Surveilance					Total				Species		
Year	population	BSC	BSE	Positive	SPR(slide positivity rate)	BSC	BSE	Positive	SPR(slide positivity rate)	Ratio of passive survillance by active surveillance	BSC	BSE	Positive	SPR(slide positivity rate)	P*f*+	P*v*+	Ratio of Pf:Pv
2001	166710	12828	12828	470	3.66	3357	3357	161	4.79	3357:12828	16185	16185	631	3.89	595	36	595:36
2002	143118	9233	9233	265	2.87	2104	2104	79	3.75	2104:9233	11337	11337	344	3.03	309	35	309:35
2003	138014	6139	6139	95	1.54	1447	1447	53	3.66	1447:6139	7586	7586	148	1.95	75	73	75:73
2004	138896	4841	4841	34	0.702	3667	3667	147	4	3667:4841	8508	8508	181	2.12	149	32	149:32
2005	144240	5004	5004	160	3.19	5435	5435	170	3.11	5435:5004	10439	10439	330	3.161	197	133	197:133

Source : Office of Joint Director ,Bongaigaon District

A.1.2: -Three years Epidemiological situation data from 2004 to 2006(Sidli PHC)

Year	Population	BSC	BSE	POS	PF	SPR	SFR	PF%	API	ABER
2004	138896	8508	8508	181	149	2.12	1.75	82.3	1.3	6.1
2005	144240	10439	10439	330	197	3.16	1.87	59.6	2.28	7.2
2006	145488	18152	18152	1121	1015	6.17	5.59	90.5	7.68	12.4

Source :Office of Joint Director Bongaigaon District

A .1.3 : Monthly malaria Report ,Chirang Districts

Sl.no	No.of month	Year	BSC	BSE	Female	Male	Total	Female	Male	Total	Female	Male	Total	Ratio of *Pf:pv*
1	January	2009	1714	1714	6	16	22	2	0	2	4	16	20	1:10
		2010	2306	2306	80	88	168	69	44	113	11	44	55	113:55
		2011	2708	2708	72	62	134	58	48	106	14	14	28	53:14
2	February	2009	4671	4671	19	33	52	17	17	34	2	16	18	17:9
		2010	4671	4671	19	33	52	17	84	101	2	-51	-49	ERROR
		2011	4585	4585	108	40	148	96	37	133	12	3	15	133:15
3	March	2009	3118	3118	38	36	74	16	31	47	22	5	27	47:27
		2010	2530	2530	144	141	285	184	67	251	-40	74	34	ERROR
		2011	4589	4589	89	51	140	63	70	133	26	-19	7	ERROR
4	April	2009	3878	3878	46	32	78	24	18	42	22	14	36	21:18
		2010	4379	4379	192	142	334	171	51	222	21	91	112	222:112
		2011	10892	10892	170	138	308	165	68	233	5	70	75	233:75
5	May	2009	6626	6626	285	151	436	277	52	329	8	99	107	329:107
		2010	14626	14626	740	801	1541	438	131	569	302	670	972	569:972
		2011	12490	12490	227	362	589	311	207	518	-84	155	71	ERROR
6	June	2009	10460	10460	585	416	1001	549	416	965	36	0	36	965:36
		2010	14444	14444	883	711	1594	442	200	642	441	511	952	642:952
		2011	14094	14094	542	454	996	504	292	796	38	162	200	398:100
7	July	2009	12642	12642	628	494	1122	412	0	412	216	494	710	206:355
		2010	16309	16309	828	303	1131	758	257	1015	70	46	116	1015:116
8	August	2009	14830	14830	428	354	782	326	359	685	102	-5	97	ERROR
		2010	7382	7382	235	270	505	172	180	352	63	90	153	352:153
9	Sept.	2009	6141	6141	264	278	542	307	135	442	-43	143	100	ERROR
		2010	13480	13480	202	188	390	163	185	348	39	3	42	116:14
10	Oct	2009	8629	8629	310	242	552	246	46	292	64	196	260	73:65
		2010	8945	8945	207	94	301	181	78	259	26	16	42	259:42
11	Nov	2009	4640	4640	155	166	321	138	85	223	17	81	98	223:98
		2010	6961	6961	122	116	238	95	96	191	27	20	47	191:47
12	Dec	2009	3589	3589	98	89	187	82	63	145	16	26	42	145:42
		2010	5968	5968	164	110	274	114	56	170	50	54	104	85:52

Source:Office of Joint Director Chirnag District.