



CHAPTER II

LITERATURE REVIEW

2.1 Introduction

The lady with the lamp "Florence Nightingale" died of TB in 1910 (Gregorian Calendar). Still we cannot say how many other ladies with the lamp have to die with TB, which has been recognized as a highly curable disease (WHO, 2001). The impact of TB on humanity has been massive. Even in the middle of 20th century, having active TB was the equivalent of a death sentence. This is in spite of the fact that for the last 50 years, a cure for TB has been available in the world. Different health forums after the 90's have shown their interest in the increasing burden of TB: As a result in 1991, WHO passed a milestone, setting TB control targets for the year 2000. For the first time, The World Bank put TB and its incidence, the DOTS cure rate and the case notification rate as development indicators (The World Bank, 2002).

In the history of public health, a declining trend of TB has not been observed. Instead the number of deaths caused by TB have been increasing every year and accepted as the most prominent killer of human beings. It has been estimated that between 2002 to 2020 nearly one billion people will become newly infected and 200 million people will get sick (Stop TB, www.world.tb.day/WTBD_2002/basicfacts.pdf).

Tuberculosis is accepted as a disease closely confounded with socio-economic variables. Studies suggest that on average three to four months of work time is lost as the result of TB. That results in an average loss of potential earnings of 20 to 30 percent of

annual household income. For the families of those who die from the TB, there is the further loss of about 15 years of income because of the premature death.

Poverty and TB has a two-fold relationship: poor individuals, poor communities and poor countries have the highest rate of TB, and TB impoverishes those with the disease. At present, 95 percent of TB cases and 98 percent of TB deaths, occur every year in the developing countries. Therefore, there is no doubt that TB results in poverty and poverty perpetuates TB. It is not just the poor but anyone can get TB, and it is a very common disease (Kumar, 1998).

With a Directly Observed Treatment Short-Course (DOTS) intervention program WHO declared the global targets of diagnosing 70 percent of the new infectious cases and 85 percent cure in the year 1995. Using DOTS, which is one of the most cost-effective public health interventions in existence,; However, in 2000 only a quarter of the population with active TB received DOTS (WHO Bulletin, 2002).

The violent conflict between HMGN and the Maoist has started in 1996 February 13 and has been continuous. As a result the health service delivery system in Dang District has been threatened and, due to the high threats NGO's and International Agencies have been shifted their offices from the Mid Western Development Region (Thapa, 2002). Thus, it can be said that the overall socio-economic factors have become worse. Increasing threats to the health service delivery in rural areas have significantly contributed to putting hurdles in the achievement of the TB control targets set by WHO. In order to understand the nature of the problem, many books, research papers, newspapers, government reports, UN reports and bulletins have been reviewed in this study. The literature was reviewed in the context

of a) burden, b) physical availability, c) financial affordability, d) acceptability, e) geographical accessibility and f) the level of civil conflict. Due to the lack of sufficient research on the problem, especially on the above context related to TB, the research findings on diseases other than Tuberculosis has also been incorporated in this literature review.

2.2 Review of the Previous Studies

2.2.1 Burden

One hundred and twenty years ago on 24th March, a German bacteriologist Dr. Robert Koch announced his discovery of the TB bacillus, the infective agent that causes Tuberculosis. After 100 years of his announcement, WHO and International Union Against TB and Lung Disease (IUATLD) jointly introduced a World TB day with various activities throughout the world. Stop TB (2002) explained that if the patient completes his/her TB treatment then Tuberculosis can be cured in more than nine out of ten cases.

The discovery of Dr. Koch made a significant impact on controlling TB. However, 120 years have already passed and, TB is still a major public health problem worldwide especially in poor countries like Nepal where the people are fighting for basic needs.

Table- 2.1: Chronology of TB

Year	Responses
1991	WHO passes milestone resolution setting TB control targets for the year 2000
1993	WHO declares TB a "Global Emergency" and create framework for effective TB control
1994	The strategy is packaged and branded as "DOTS" in 1995
1996	Launched DOTS Program in Nepal
1998	Senior public health experts identify key challenge to DOTS expansion in the form of global TB epidemic: March
1998	Stop TB initiative for global action campaign was launched: November
2000	Milestone Amsterdam conference and declaration
2000	WHO resolution WHA53 calls for international support for the global partnership to stop TB
2001	Launch of global drug facility: March
2001	Launch of the global DOTS expansion plan: May
2001	Launch of the global plan to stop TB.

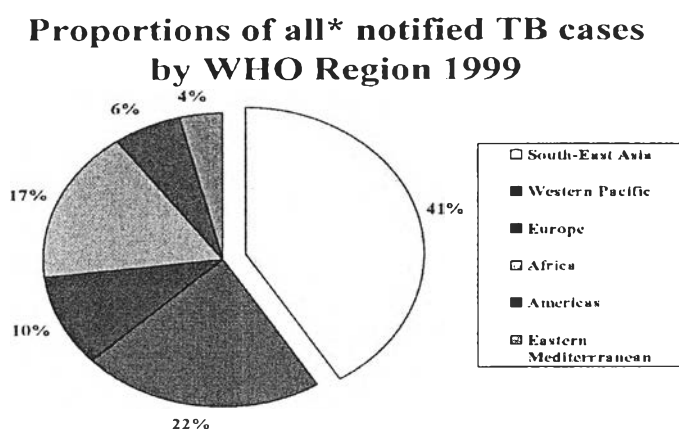
Source: WHO, 2001; WHO, 2002, and Bam, 2002

WHO estimated that one third of the global population is currently infected with Tuberculosis. Every year 2 million people including more than 250,000 children die of Tuberculosis and 8 million new cases occur in the world (David, 2000). UNICEF (2002) reported that there was 9 percent increase in the number of TB cases between 1997 and 2000. In Asia it infects one of every two people. They are generally not infectious but they may become ill at any time in their life especially during times of stress or illness and following infection with HIV (David, 2000). Someone who is HIV infected has at least a ten-time greater risk (and probably much higher) of developing TB than a non-HIV infected person (Marchant, 2001). Around 40 million people of the world have HIV or AIDS, 70 percent of them living in Sub-Saharan Africa. Only 130,000 people in that region

have access to anti-retroviral drugs, whose cost remains controversial despite big pricing concessions by the western pharmaceutical firms (WHO, TB News, 2002). The situation could be more explosive in Nepal because 34,000 population are currently living with HIV/AIDS (UNAIDS/WHO, 2000). Due to the free border with India, less reliable laboratory services and poor access to health services, the current situation could still be just the tip of the ice-burg.

The estimated incidence of TB shows that two-thirds of the cases occur in Asia. The following pie chart shows that South East Asia has been ranked as a high TB burden area, where 41 percent cases of the total cases are noted. The pie chart shows the lower rate of 4 percent in the Americas. Poverty, increasing number of HIV/AIDS and civil conflict has been posing threats to the TB service delivery system throughout the South Asia Region.

Figure-2.1 Proportion of All Notified TB Cases by WHO Region



It has been reported that every year approximately 2 million people in India develop Tuberculosis and that this accounts the 1/4th of the world's new TB cases (Dye and Suzamme1999

Figure- 2.2: TB in South Asia

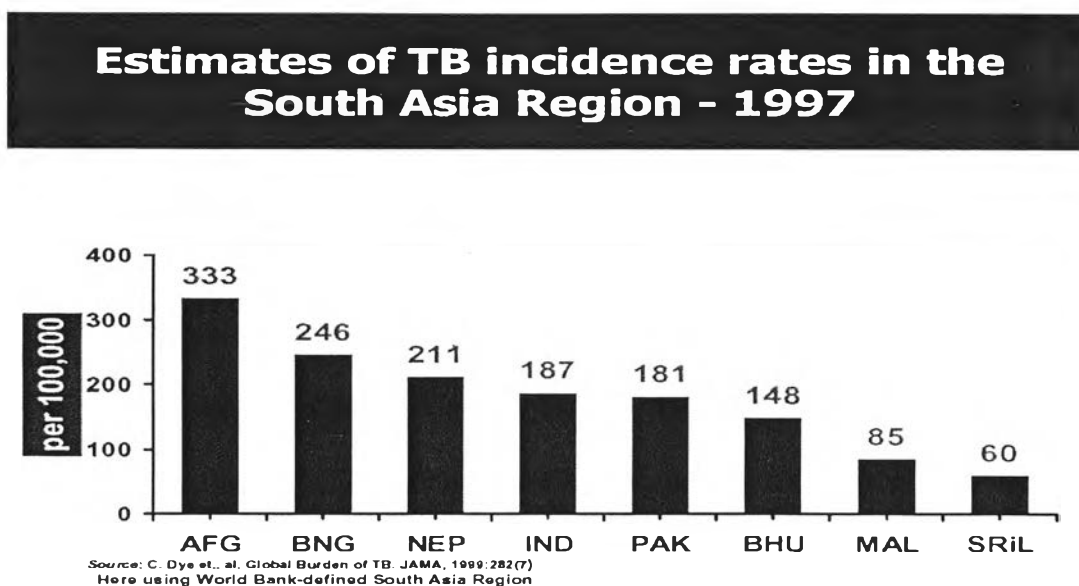


Figure 2.2 show that Nepal has the 3rd highest TB incidence among the South Asian countries. South Asia Association for Regional Cooperation (SAARC) reports that South Asia accounts for more than 35 percent of global TB burden with 0.6 million deaths every year (Kumar, 1998). The Figure 2.2 was prepared by using the definition of The World Bank which includes Afghanistan in South-Asia.

The history of TB control program in Nepal has been modifying with the health systems development in Nepal. The following Table 2.2 shows the historical development of TB control program in Nepal.

Table-2.2: Historical Development of TB Control Program in Nepal

1934 : Establishment of Tokha Sanatorium of 50 beds in Kathmandu .

1951 : Chest clinic in Bir hospital , Kathmandu .

1953 : Nepal anti-TB Association in Kalimati, chest clinic in Kalimati, Kathmandu .

1953 : Shining Hospital in Pokhara , started treatment of TB patients.

1961 : Central chest clinic at mahabaudha, Kathmandu.

1966 : Direct BCG vaccination to school children in Kathmandu valley .

1968 : B.N.M.T Commenced TB control activities in Eastern Region.

1972 : Integrated Community Health project in Bara and Kanski Districts.

1973 : Thomes Dooley foundation started anti- TB activities in Tanahun.

1973 : INF started treating both TB and Leprosy patients in Gorahi, Dang District.

1975 : Active case finding program by sputum microscopy by mass BCG vaccination.

1978 : First National TB Control seminar in Kathmandu.

1981 : TB Coordinating Committee to advice Ministry of Health.

1987 : Record of discussion singed between HMG Ministry of Health and Japanese

Government to established NTC in Kathmandu and RTC in Pokhara.

1994 : National Tuberculosis Program Review.

1996 : DOTS pilot project start.

2002 : 75 district DOTS coverage with 95% population coverage

Source: Review of the NTC publications, NTC 2001

It has been reported that 80,000 to 90,000 people with active TB live in Nepal. Likewise every year, Nepal has 44,000 new cases and 20,000 smear positive cases; this burden results in 8,000 to 11,000 deaths per year in Nepal (NTC, 2001). Multi drug

resistance, at least to Isoniazid and Rifampicin has been reported to be 1.1 percent in the country (DoHS, 1997). This rate of MDR TB is alarming because Rifampicin was only introduced in 1990.

The Department of Health Services (1997) reported that total 334 smear positive cases were registered in 1996 in Lalitpur District. Incidence and cure rate have been reported to be 112.7 (per 100,000) and 64 percent respectively. In 2001, NTC (2001) reported that the 272 smear positive cases identified in Lalitpur District but the reliability of this data has been questioned by several reports (Kumar, 1998; NTC, 2001; DoHS, 2001). The number of cases has been appeared to be decreasing. In Dang District, a total of 373 cases were registered in 1996 and cure rate has been reported to be 83 percent. The incidence rate has been 90.7 per 100,000 populations. National Tuberculosis Center (2001) reported that the new smear positive cases were 396 in the year 2000/2001 in the Dang district. Based upon the available data, we can conclude that the cases are increasing in Dang, which is an area with conflict. Public health experts argue that more research is needed to validate the above-mentioned data.

Some publications argue that the case notification rate has been lower in Nepal. The increasing level of conflict, illiteracy and wide spread poverty can perpetuate the TB cases in Nepal (Smith, 2001). Moreover, the high population growth rate of 2.4 percent, high maternal and infant mortality has indicated that the situation is not as simple as published. One study in Nepal pointed that the ratio of passive case detection between male and female is 2.6:1 (NTC, 2001). Considering the above-mentioned facts, the Heads of States and Governments of SAARC placed a high priority on poverty alleviation at their 11th Summit held in Kathmandu. TB is the largest killer of poor people. TB is a socio-medical problem, which has emerged as the largest threat to public health

today and the most prominent cause of death among adults from a single infectious agent (Kumar, 1998). The economic burden of TB on developing countries like Nepal is enormous as TB mostly affects the economically active population.

The poor are the most vulnerable to TB infection. Living in an ill ventilated, over crowded environment and with poor nutrition in combination fosters the creation of the TB epidemic. Most of the populations of SAARC countries still reside in rural areas where access to basic health service is missing. Studies in India, for example, have found a strong correlation between income and TB. In one district of India, TB prevalence was two folds higher in the low-income group who earn around US\$ 20 per month. In this context, the scientific director of IUATLD Dr. Donald Enarson suggested the commitment of 5 per cent of the health budget even in those countries with the lowest health expenditure (WHO, 2002).

The poor have limited access to health care, especially to all facilities for early diagnosis and a complete course of treatment. At a Regional Conference of Parliamentarians in Dhaka, Bangladesh, the relationship between poverty and Tuberculosis was highlighted. Intensified efforts to formulate a pro-poor strategy which will enrich health systems to serve the poor more effectively were also discussed (Bam, 2002). In the case of Tuberculosis, this means that diagnostic and treatment facilities must be made more easily available and affordable to the poor people. It also means that the poor must be empowered to access the services as easily as anyone else and even to demand their rights to cure.

In March 2000 Ministers of Health and Finance from more than 20 countries that have 80 percent of the world's Tuberculosis burden met in Amsterdam and issued the Amsterdam Declaration. The declaration stated that the global situation was both "alarming and unacceptable" (Bulletin of the WHO, 2002). However, the situation has been blurred by various uncertainties i.e. HIV/AIDS and MDR TB. Resurgence of TB in many industrialized countries may cause the low budget allocation for the poor countries like Nepal. WHO's modest strategy DOTS has also been implemented in Nepal since 1996. Data shows that the DOTS program has been achieving good success in Nepal. With 84 percent success rate DOTS is getting more improved and intersectional partnership at the community level (NTC, 2001).

Out of 3,732 cases registered in private health sector 62 percent were reported to be cured and success rate was noted to be 68 percent. The controversy can be seen in different studies and reports. In its report, The World Bank mentioned that case detection rate under DOTS is 44 percent and treatment success rate is 89 percent in Nepal (WDR, 2002). The major portion of population has not been considered, thus the country may need to take immediate actions to tackle the increasing burden, especially because of the problems of HIV/AIDS and MDR-TB.

Table-2.3: New Smear Positive Cases at Non-DOTS Centers in Nepal

Types	Cases
Registered	3732
Cured	62%
Completed	7%
Died	4%
Failed	1%
Default	10%
Transferred	6%
Success	68%

Source: WHO Report, 2002; WHO/CDC TB/2002

As shown in Table 2.3, the default rate in private sector has been documented to be 10% of the total registered cases. In comparison to the public health services, the private

health providers have a low success rate. More importantly, the default rate was 4% higher than in the public sector. This is despite of the fact that most patients are satisfied with private health service providers.

2.2.2 Physical Availability

Difference between physical availability and effective availability can arise because various barriers (poor service, cost, travel times and perceptions) may keep people from using facilities that are physically available in any given health centers (Marc, William, Peter and Michael 2001). High infant mortality followed by lower per capita income assist us to view the poverty level of Nepal. In Nepal 74 out of 1,000 infants die by their first birthday. The most accepted reason of high infant mortality is poor income level (The World Bank 2002). The poverty level of the Nepal is higher in the world, 37.7 percent population earns less than US\$ 1 per day. Based upon the above, we can speculate that due to the poor income level the access and utilization of health services especially TB services will be decreased.

In practice the term access is often employed to refer to utilization. Per capita measures like hospital admission or out patient visits are computed for various population groups and those with low use are said to lack access. But use is only partially a reflection of effective availability. Patients may not choose to use services even if services are available. Access has been abolished as a meaningful concept because it is no longer independently measurable apart from utilization (Marc et al., 2001).

Access defined, as effective availability is an obvious intermediate criterion. It is influenced by both health status and consumer satisfaction. Similarly egalitarian liberals, who focus on health as an aspect of opportunity, are also likely to view access as a means

of providing the minimum quality of life which they see as a positive right. Out of the women visiting health facilities 64.4 percent of them were not satisfied with the services they received (World Bank, 2001).

HMGN has established a social welfare program to increase the accessibility of primary education and health services in rural communities. As a result the number of health posts have been remarkably increased from 220 in 1992 to 3,174 in 2001 (CBS, 2001; DHS, 2001). In the light of this perspective access defined as a physical availability is often a focus of intense political discussion.

Some egalitarians like Amartya Sen argue that government is obligated to make services available, and then let citizen use these as they choose (Marc 2001). In this view, effective availability of health care would be a core goal. Lack of medicine has been reported to a big problem in the world (WHO, 2002).

Table-2.4: Perception on Health Services

Problems	Households %	Health workers %
Lack of medicine	59	84
Poor condition of facilities	40	61
Bad attitude of staff	35	--
Lack of staffs	11	64
Lack of community support	--	13

(Source: NPC/UNICEF, 1996)

A survey done by the National Planning Commission of Nepal and UNICEF found that the majority (59%) of households and 84 percent of health workers perceive lack of medicine as a major problem (Table 2.4). The condition of facilities followed by bad attitude of staff can provide an ample logic to analyze the access and utilization of TB services in Nepal.

2.2.3 Financial Affordability

TB is estimated to take an annual economic toll equivalent to US\$ 12 billion dollars from the income of poor communities (WHO, 2002). HIV Sero-prevalence rates of 10-15 percent, which is no longer uncommon in certain parts of the world, can translate into the reduction in growth rate GDP per capita by up to 1 percent per year.

Studies suggest that on an average three to four months of work time are lost as a result of TB (Kumar, 1998; NTC, 2001). This results in an average loss of potential earnings of 20 to 30 percent of annual household income. For the families of those who die from the disease, there is further loss of about 15 years of income because of the premature death of the TB sufferer. Services are valuable only if they produce outcomes and the reverse is true as well. The lack of services is most significant when outcomes are unsatisfactory (Marc et al, 2001). The indirect cost of TB amounted to 20 to 30 percent of household income. The following table (Table 2.5) assists us to understand the cost of TB for the patients in different parts of the world.

Table-2.5: Cost of TB Care

Cost to patient	Bangladesh	Uganda	India	South Africa
Direct cost	130	68	41	99
Time lost (months)	14	10	3	4
Lost income	115	161	89	272
Indirect cost as % of annual household income (travel, food, snacks)	15%	N. A.	14%	N. A.
Total cost as % of the annual household income	31%	N. A.	20%	N. A.

Source:India: Ramachandran et. al, IJTLD, 1999; 3: 869-877, Bangladesh: Croft et al, IJTLD 1998; 2: 252-254 Uganda: Saunderson Soc Sci Med, 1995; 40: 1203-1212, South Africa: Floyd et al, BMJ, 1997; 315: 1407-1412

Due to the lack of research in Nepal we cannot estimate the situation in numbers and figures. However socio-economic similarities with India can help us to estimate the magnitude of the financial burden in TB cure in Nepal. In United States a child born today in the highest social class can expect to live 5 years longer than a child born among the poorest (Brundtland, 1999). The above-mentioned facts assist us to understand the linkages between poverty and tuberculosis.

Since its establishment the Ministry of Health of HMGN has been trying to craft the health care delivery systems in Nepal. The budget allocation in primary health care has been higher every year, which indicates the priority of HMGN (Table 2.6).

Table-2.6: Health Budget by Sub-Sector (Percentage of total budget)

Program	1995/96	96/97	1999/2000	2000/01	2001/02
Primary health care	69.0	64.3	75.9	73.5	71.0
Hospital services	23.1	29.5	17.9	20.0	23.8
Health policy and management	4.0	2.8	2.8	2.8	2.3
Traditional medicine	4.0	3.4	3.4	3.7	2.8
Total	100.0	100.0	100.0	100.0	100.0

(Source: New ERA, MOH, ORC MARCO, 2001)

The overall health indicators have not been improved as targeted by 2nd Long-Term Health Plan but the budget allocation for primary health care was reduced in 2000/2001 and 2001/2002 financial years. Around 90 percent people are living in the rural areas where primary health care services are available (DoHS, 2001). However reduction in the budget allocation may contribute to the reduction in the access and utilization of health services in Nepal. Another study suggests that government is providing the basic primary health services where the household expenditure has been reported to be 74 percent of total annual budget (David, Rous, Keshav, Kawlmyan, Sangraula, 1998). The level of poverty, indirect

cost of TB care, government budget allocation and household expenditure on health care can threaten the access to and utilization of TB services in Nepal.

2.2.4 Acceptability

Women are about half of the population and they produce the 80 percent of foods consumed domestically (Kumar, 1998). The International Meeting on TB and Gender held in Sweden from 24th to 25th May 1998, came up with following major concerns about the TB and gender.

- TB affects the women mainly the ages of 15-45, which has been known as a reproductive age group.
 - TB is the single biggest infectious killer of women in the world.
 - Over 9 hundred million women and girls are infected with TB worldwide.
 - 1 million women and girls die due to TB every year.
 - 2.5 million women and girls get sick every year from TB that means they have the potential to spread the TB to 37.5 million populations every year worldwide.
 - Case notification ratio between male and female has been reported to be 2:1.
 - In Nepal Passive case finding ratio between male and female has been published as 2.6:1.
 - In India female's aged 5 to 24 had case fatality rate over 35% greater than males of the same age group.
- Source: Kumar, 1998, Smith 2001

Lack of access is often used as an explanation of poor health status in rural areas, or low level of satisfaction among the poor (Stebbing, 1999). Some studies attempt to determine why under utilization of health services exist despite the high need for health services and the existence of expansive network of over 4,000 outreach level public health facilities, in Nepal. Some women were unable to access care due to distance to health facilities and lack of a means of transportation (The World Bank, 2001). Likewise the burden of heavy household work restricts women from seeking health care.

Access sometimes simply refers to whether services are offered in specific areas. However, the World Bank stated that increased education of women is positively correlated with increased utilization of all health services (The World Bank, 2001). It has been documented that the literacy rate of women in Nepal is only 51.1 percent. Although PHC components are more focused on women and children, 65 percent women in rural areas do not participate in health service planning (CBS, 2001; The World Bank, 2001). Various observations among Nepali societies concluded that unmarried women with TB were more likely to face difficulties in getting married and married women often tried to hide their illness for fear of divorce, rejection or blame for developing the disease. Likewise Dalits (lower caste) and certain other disadvantaged ethnic groups also lack in their access to education; only 30 percent of their children attend school in comparison to the national figure of 66 percent. The literacy rate of Dalits children is about half that of total child literacy rate of the country (NHDR, 2001). One study carried out in South India identified that 29 percent of the patients delayed in seeking health care for a month, out of them 40 percent delayed due to lack of awareness about Tuberculosis (Rajeswari., Chandrasekaran., Suhadev, Sivasubramaniam, Sudha, Renu, 2002).

It has been reported that the male patient and those with alcoholism were at increased risk of default, as identified by community survey in South India (Santha T., Garg, Frieden, Chandrasekaran, Subramani, Gop, Selvakumar, Ganapathy, Charles, Rajamma and Narayanan, 2002). Access to TB services should not be determined by physical access alone, but also by ownership in the planning and delivering the services. It has been well understood that women and children have the most to gain from the investments in primary and other health services.

2.2.5 Geographical Accessibility

Around 90 percent people are living in rural areas where the means of transportation are limited or not available. The country is suffering with the insufficient number of technical staff in the health sector. In its 2000/2001-report, the Department of Health Services mentioned the following problems which affect geographical accessibility: that lack of microscopy staff: cross border to India: (with frequent mobility and labor exchange between the two countries): vacant posts in the Districts Tuberculosis and Leprosy Assistants (DTLA) are the major problems being faced in the Tuberculosis program. The most important issue is that very few health personnel are willing to work in remote villages and this threatens the access to and utilization of TB services.

One report pointed out that 45 percent of the population is getting basic services within 30 minutes distance from their house (Upadhyay, 1998). Various studies identified that due to the long distance women are unwilling to visit the health centers (World Bank, 2001). We must add these cultural factors: decisions re women's health care are made by the husband and/or mother-in-law; women are not permitted to walk alone; women have home tasks which must be completed on daily basis; fear of recrimination if TB is diagnosed. The direct and indirect costs for travel could also provide an explanation for the low access and utilization of TB services. The Department of Health Services (1997) mentioned that inadequate planning and unavailability of transport have hampered TB drug supply in Nepal.

The level of civil conflict is also hindering the TB services. In the remote areas, Maoist have setup their own policy, which has to be followed by people. During the

confrontation and fighting people are not allowed to walk from specific areas and to use certain roads. Thus, the difficult geography where there is no better road transportation may provide difficulty in access to and utilization of TB services.

2.2.6 Civil Conflict

As a result of conflict, directly or indirectly 191 million people lost their life in the 20th century (WHO World Report on Violence and Health, 2002). In addition, the WHO and World Bank reported that war will be one of the top 10 causes of Disability-Adjusted Life Years lost by the year 2020 (BMJ, 1998). More importantly, for every combatant killed in war, there is one non-combatant who dies directly from the war. The inescapable issue in public health is, when one combatant dies, an additional 14-15 civilians lose their lives from loss of shelter, food, water, epidemics and several other diseases or deformities (Murray, Lopez, 1997). In addition, the study identified that, in Sierra Leone, 62 percent of rural units were not functioning during the conflict (UNICEF, 2002).

The World Bank (2001) published that civil conflict is both cause and consequence of poor economic performance of the country. On average, the per capita output falls by more than 2 percent a year during civil wars. The most important costs of civil conflict are: loss of the life, loss of service delivery system; obstacles to reconstruction (Collier, 1999). Furthermore, civil conflict can also accelerate the collapse of the state, disproportionately hurting the poor people must (Luckham, 1999). The problems of civil conflict spill across borders, increasing the burdens of neighboring countries. The World Bank estimates that in 1998 there were 12.4 million international refugees and 18 million internationally displaced people (The World Bank, 2001).

The linkage between health and civil conflict should be evidence based: how the health sector can deal with the growing level of conflict; what health interventions have already been done. The Roman Catholic Church and UNICEF announced the “Days of Tranquility” in El Salvador during 1985-1992 during which the war was suspended for three days each year for the immunization of children. As a result, more than 300,000 children were successfully immunized and the incidence of Polio decreased to zero. In addition, these days contributed to the establishment of the peace accords in 1992 (Walker, 1993). The studies tried to establish the knowledge of how the rapidly growing civil conflict is affecting political institutions and process as well as how the systems and leaders are accommodating to new pressures and challenges. Research can take inferences from the cold war of the yesteryears, from the region’s economic crisis and from the new challenges of terrorist attack in New York (The Post, 11th September 2001).

The root causes of the conflict could be many. Some explored causes are; traditional deep-seated political, economic and social exclusion of a range of people based on class, caste, gender, ethnicity, religion, language and geographical segregations. The well off, comprised of Brahmins, Chhetris and some assimilated Newars, have not only monopolized the power and the resources but have protected their privileged position with total disregard for the poor people. By the end of 2000, except for HMG’s District headquarters and their immediate surrounds, the Maoists had formed People’s Governments in all VDCs of the Dang Districts. The organizational structure of People’s Government is reported to be based on caste, gender and occupational groups, including higher and lower castes, ethnic groups, intellectuals and militia (DFID, 2003)

It has also been published that Maoists have a parallel judiciary system operating through “People’s Courts”. People’s Courts have been set up to hear cases, pass judgment and impose sentences at a local level. These courts are generally mobile and the members are comprised of a party representative, a people’s militia representative and a village People’s Government representative. Local disputes filed in the Districts range from husband-wife disagreements, to corrupt use of public funds, to “crimes against the people’s war”(DFID, 2002).

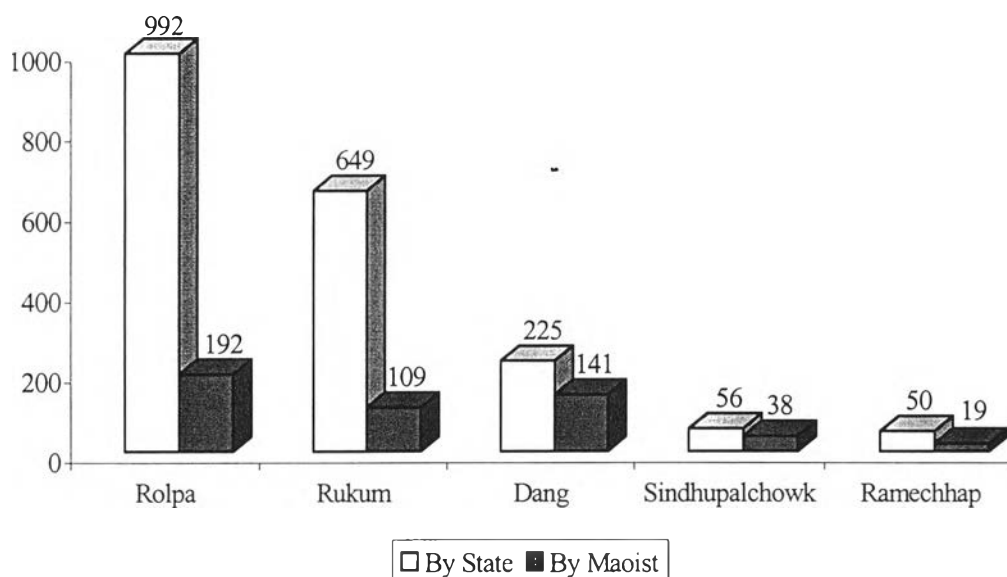
It has been explained that the existence of Maoists has raised the possibility of a revolution in social consciousness amongst the people. The atmosphere of impunity for the abuses of authority and power through corruption, discrimination and injustice by state agents and rural elite has been challenged. In the broader spectrum it can be speculated that, the Maoist insurgency has increased people’s willingness and ability to challenge practices of discrimination, exploitation and domination in their communities (DFID, 2002; INSEC, 2002).

Studies carried out in Maoist affected areas mentioned that by the year 1998 local landlords and elites had left the rural communities due to the threats from the Maoists. The government was forced to close all police posts in areas outside of District headquarters by 1999. By 2001, government services and elected representatives ceased operating in rural villages. Development agencies and NGO programmes scaled down or pulled out of Maoist held and contested areas. For many ordinary people, the only evidence of government presence became random and unpredictable searches, and arbitrary and often physically violent-detention by HMG’s security forces. These military interventions by security forces

have had a significant negative impact on local communities (INSEC. 2002; DFID, 2002; Thapa and Sijapati 2003).

Due to the heavy concentration of Maoists and Maoist supporters in their strong hold Districts, they experienced some of the heaviest clashes and most brutal operations of the war. The Figure 2.3 shows the number of people killed by the State and the Maoists in the 5 Maoist affected Districts of Nepal.

Figure- 2.3: Comparison of the Killings in Conflict Affected Districts

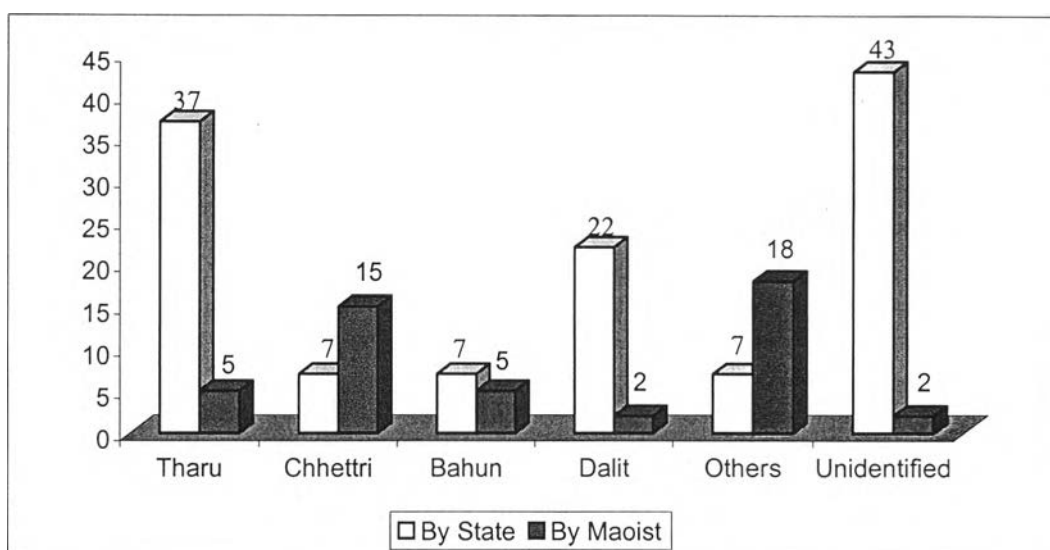


Source: INSEC 2003

A total of 2,471 people were killed in these five Districts in the last seven years; 1972 by HMG and 499 by the Maoist. Of the total number of dead, 48% of casualties occurred in Rolpa, 30% in Rukum and 15% in Dang.

The Figure 2.4 shows that more Tharu ethnic minority in Dang were victimize by civil conflict areas, specially more has been killed by the State.

Figure-2.4: Comparison of the Killings among the Ethnic Groups in Dang



Source: INSEC 2003

A close study of insurgent activities in the country show that the most affected area is contiguous and concentrated in the Mid-Western Region. It has been documented that insurgency has directly affected the lives of roughly two thirds of the people of Nepal (Tiwari, 2001). The tourist sector has reportedly been affected by the state of emergency and insurgency. The government announced in late June 2002 that the economy had greatly suffered from the insurgency with industrial production, trade and tourism affected. Many development projects have had to be abandoned or delayed (Nepal Extended Bulletin, 2002).

The HMGN has declared the initial state of emergency on 26th November 2001, after that 991 security personal and 1862 Maoist have reported to be killed. International

communities have also observed the worsening situation of Nepal. US secretary Colin Powell visited Nepal on 19th January 2002. The US Government and Indian Government have given moral and possibly military support to the Nepalese Government (Nepal Extended Bulletin, 2002).

Snapshot of Civil Conflict in Nepal

- February 13th 1996-Maoist declared the “peoples war”.
- May 1998- human rights violations increase dramatically after police launch a “security mobilization operation”.
- February 2000- UN expert on unlawful killing visits Nepal and urges the international community to support the government with resources, including funding and expertise.
- Mid 2001- Maoists set up “people’s government” in 22 districts.
- 23 November 2001- peace talks break down, Maoist attack police and army post in 42 districts.
- 26 November 2001- state of emergency declared. New anti-terrorism measures give to security forces.
- Affluent countries and neighboring countries approved the government’s anti-terrorism measures.
- Insurgency has directly affected the lives of roughly two-third populace.
- 19th April 2002- Government announced the financial reward to those who catch or inform about Maoist leaders.
- 2003 Second ceasefire; Maoists refocus on social intervention in their stronghold areas. And again failed to reach on the common consensus.

The research has pointed out that the cost of war goes beyond the direct health effects of bombs and explosion. Economic and social systems are disrupted, famine and epidemics may follow, and resources are diverted to, the military rather than health, thereby, wars become a public health problem (Graeme, Barbara, 2000). From 1991 – 2000, military spending grew on an average rate of 13.2 percent per annum. The budgetary allocation set aside for defense in 2001/2002 was Rs. 4.52 billion. If this growth rate continues, military spending will rise by another Rs. 4 billion during next five years. More significantly, current police and defense spending combined has outstripped spending on health and drinking water/sanitation together, as well as three fourth of the education budget (NHDR, 2001). Due to security reasons the Prime Minister of Nepal has been

allocated 57.44 (NRS) billion for regular expenses for the financial year 2002/2003 (Kathmandu Post, 2002 July 9th). The regular budget covers 59.8 percent of the total budget. The budget has been focused on addressing the growing civil conflict; thus the allocation in health and development sector has been decreased. This budget covers 3.32 billion NRS for improving basic health, which is 3.45 percent of the total budget. This budget cannot manage the extension of primary health services in the remote hilly region. More over a field report pointed that the Maoist insurgency in western Nepal has been putting threats on the health of people (Upreti, 2002).

The increasing level of civil conflict is destroying many of the gains of the past decade in immunization as well as in maternal and child health. The crisis goes beyond lack of medicines and vaccines, there is a danger of starvation as the conflict makes food scarce (Upreti, 2002). Thus, it can be argued that the various level and nature of conflict has fueled the damage to the access and utilization of primary health care delivery system in Nepal. The patchwork policies are affecting the long-term treatment of Tuberculosis in Nepal. Despite policy frameworks and legislative provisions for addressing access, equity, and empowerment issues, the weaker section of the society (including women and the disadvantaged groups) have inadequate access to resources and decision making process of local government (NHDR, 2001). More importantly one study carried out in Guinea Bissau identified that TB mortality rate among the war cohort is 3 fold higher than for the peace cohorts (Gustafson, Victor, Cesaltina, Hernik, Remonie, 2001).

2.2.7 Conclusion

One study carried out in the Bardia District, which is in the same development region of Dang District pointed that 79.8 and 78.4 percent people are utilizing the health services from government and private sector respectively. Out of the coverage only 54.6 percent of those who are getting services from government and 75.1 percent of those who are utilizing the private sector have been reported to be satisfied (NHDR, 2001). The weak absorptive and administrative capacity of the health sector, the non-functioning referral system, and the irrational prescribing and use of medical drugs are the major problems observed in the country. Absence of effective regulatory and monitoring mechanism of health service providers contribute to ineffective utilization of national health expenditures, private as well as public. (WHO Bulletin, 2002) reported that the international standard treatment for TB, the directly observed treatment short-course (DOTS) is one of the most cost-effective public health interventions in existence, but in the year 2000 only a quarter of those with TB received DOTS.

The worries have been expressed in different nooks and corners of the world. The future generations will ask why we continued to allow two million people to die every year from the disease that can be cured with drugs that cost only US\$ 10-15. They will rightly question our commitment, our priorities, our sense of justice and our understanding of human rights. Likewise in 1990, the WHO Commission on the Health Research for Development stated “the international community matches the magnitude of the Tuberculosis problem only by its relative neglect”. Other studies identified that the treatment cost of MDR-TB is high economic burden for all countries. In the early 1990s the US gave high attention to TB control when MDR-TB killed about 500 people in New York City. The document says that US has spent US\$ 1 billion to control that epidemic (David,

2000). The management of single case of MDR-TB can exceed US\$ 250,000 (A. Zumla et al., 1999). It is clear that the country like Nepal with a low health budget and poor technology cannot easily combat the MDR-TB. Merchant (2000) mentions, "MDR-TB is becoming an increasing threat and is up to 100 times more expensive to treat than non-drug resistant strains". Thus, urgent actions are required to protect human beings. From the above-mentioned publications, we can conclude that with the various nature and extent of difficulties world communities are trying to control the TB burden through different initiatives. The most essential initiative could be the access and utilization aspect, both of which are highly dependent with above mentioned independent variables i.e. burden, physical availability, financial affordability, acceptability, geographical accessibility and civil conflict.

2.3 Planning

Various studies have indicated that the cross-sectional study design is the most applicable design in planning health interventions (WHO/IDRC, 1993; WHO, 1994). Thus, a cross-sectional study design was used in this study. In the view of that statement planning to be used by District Health Facilities was formulated within the framework of this study. National Tuberculosis Center (NTC) has prioritized planning as an important task to be accomplished (NTC, 2001). Routinely collected data from health services records does not provide a complete description of the current health status of the population suitable for use in health service planning (Lwanga, Tye and Ayeni, 1999). Thus, after conducting focus group discussions, a community participation approach had been used to develop the plans in this study.