centre for poverty analysis

Trends in Health and Living Conditions in the Central Province in Sri Lanka

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1. INTRODUCTION

Objectives of the Health Analysis

According to the UNDP Human Development Report Sri Lanka has maintained a good health record in comparison to other countries in the South Asian region throughout the years. This impressive standing could be attributed to the universal availability of free primary health care and a well-established network of facilities.

Although the appointment of a Presidential Task Force on Health Policy in 1997 was on par with the government's objective of health policy reform, health sector expenditure remained relatively low. The expenditure (as a percentage of the GDP) remained at a stagnant 1.4% in 1997, 1998 and 1999 (Central Bank) with the highest recorded expenditure being 1.8% in 1995. Yet, due to the high level of participation and support of multilateral agencies such as the WHO, maternal and infant mortality and, morbidity have decreased but the rise in socio-health problems such as mental illness, drug addiction and alcoholism remain unchecked. On the other hand the non compliance with the established referral system and an increasing demand for more modern medical services have been attributed to the rise in Sri Lanka's per capita income and this in turn has led to the increase in the number of private health facilities and practitioners.

Health was one of the six key variables used to monitor development trends in the Central Province on which data was generated through the JIMOD Household Survey and Participatory Assessment. The study examined service user perceptions regarding health awareness, health-seeking behaviour, the quality of services and facilities, the types of diseases and disease trends, and general health conditions. The outcomes of the study were used to analyse and comment on disease trends, changes in health conditions, approaches to health care and developments in this field in the Central Province.

2. BACKGROUND OF HEALTH CARE IN THE CENTRAL PROVINCE

It is evident that the pace of development of health care in the Central Province increased during the latter part of the decade between 1990 and 2000. Presently the Province is serviced by 2 Teaching hospitals and 5 Base hospitals (Annual Health Bulletin 2000) and Kandy being the most urbanised district and the Provincial capital, is the centre for health care having the most developed infrastructure in the province. One of the largest teaching hospitals in Sri Lanka is located in Kandy and this not only opens avenues to the general public to receive specialist care, but also gives access to the latest in medical technology.

On the other hand Matale and Nuwara Eliya districts rate much lower than Kandy in terms of both the provision of health care and, the health condition of the population. This is exemplified by the distribution of specialists in curative care in the province Kandy 81, Nuwara Eliya 9 and Matale 4 (Annual Health Bulletin 2000). Moreover Kandy has the most number of hospital midwives in the island (289). Nuwara Eliya remains an outlier in many areas with the non-existence of physiotherapists and ECG recordists in its hospitals coupled with the country's highest rate (58%) of births occurring outside of institutions (Sri Lanka Demographic and Health Survey 2000). It also records the highest incidence of deaths due to suicide (60% of the total deaths in the district) and lacks many basic health related infrastructure facilities. There are only two government hospitals, which service the entire district and are experiencing problems of understaffing.

There is a high prevalence of waterborne diseases such as dysentery and diarrhoea owing to a high level of water contamination. These afflictions are widespread especially in Nuwara Eliya because of a limited knowledge on the prevention of available water resource contamination. It should be noted here that the water sources are located in the hills and once the water is collected there is no proper storage and preservation.

The Province was also affected by the dengue epidemic, which was a national problem in early 2001. On a district basis, there is a considerably high incidence of hepatitis in Kandy whilst Matale records a high incidence of bacillary dysentery and gastroenteritis. Nuwara Eliya records a high incidence of asthma and tuberculosis.

The containment of many diseases in the Province has been possible because of the educational and awareness programmes conducted by the Health Education Unit of the Ministry of Health which operates on different institutional levels, i.e. staff education, public awareness campaigns and school level workshops. The dissemination of information on both preventive and curative practices through volunteers who work with and through community empowerment/development societies also makes disease identification etc. available at a community level.

An Overview of Health Related Indicators

Table 1: Health Related Human Poverty Indicators for the Central Province (Percentage of the population)

Indicators	
Central Province - Population 1994	3.9 million
Adult illiteracy	15.3
No access to safe water	26.1
Children not fully immunized	13.8
Births not in institutions	21.5
No access to safe sanitation	24.4
No access to hygienic toilet facilities	40.0

Source: Excerpted from the PRS June 2002

The Central Province had the second highest adult illiteracy rate in the country in 1994. While 52% of the population did not have access to electricity, many (40%) people lacked access to hygienic toilet facilities, safe water (26.1%) and sanitation (24.4%) (PRS). Furthermore doctor-patient ratios, especially in rural areas of the Province remain low.

Table 2: Vital Statistics by District

District	Crude Birth Rate 2000*	Crude Death Rate 2000*	Infant Mortality Rate 1997	Neo-Natal Mortality Rate 1996	Maternal Mortality Rate 1996
	Per 1,000 Population		Per 1,000 Live Births		Per 10,000 Live Births
Kandy	19.9	6.5	21.6	22.1	4.0
Matale	18.6	5.2	14.9	7.0	0.0
Nuwara Eliya	18.0	6.6	20.2	17.1	4.7
Sri Lanka	17.3	6.0	16.3	12.9	2.3

*Provisional
Source: Excerpted from Table 4 Annual Health Bulletin 2000

Health authorities in all three districts have recognised that Infant Mortality Rates (IMR) could be further reduced. The significant decrease in prenatal mortality rates in Kandy and Matale have been attributed to the increase in the level of awareness and continued education of mothers in the Province. Similarly the rise in the number of institutional births is substantiation of the increase in the number seeking formal treatment.

The Estate Sector

A large majority of the province's population comprises of the estate community. The estate workers are resident on the tea estates whose management was handed over to private conglomerates by the government on a 50-year lease agreement. The health facilities of these workers have been a long-standing point of agitation for politicians, workers' unions and the workers themselves. Apart from poor infrastructure, there are other factors that contribute to the low level of health in this sector including low levels of income, poor levels of literacy and unhygienic living conditions. Their housing facilities consist of 'line rooms', which are 8'x12' in size and house a minimum of 6-8 residents. Often these sites are not repaired or maintained and provide little shelter from the elements.

Common illnesses amongst the estate population include fever, coughs and nausea while incidence of asthma, bronchitis and lung afflictions are high. Communicable diseases almost always reach epidemic proportions in the estate sector. Moreover a lack of a balanced diet results in most of the children suffering from dystrophy and malnutrition in the sector. Despite the fact that 50% of the workforce is female in the estate sector, none of the estates in the Province have female EMAs (Estate Medical Assistant), a fact that indicates that maternal and child health are far below the provincial standards.

After privatisation health care came under the purview of the estate management and since then many allegations have been levelled against the neglect of health care and health facilities. Currently the Ministry of Health is in the process of integrating the estate health facilities to the National Health Service.

On the other extreme traditional beliefs are strong amongst the estate sector workers. State medical personnel perceive this outlook to have a negative impact on health as many patients resort to traditional healing practices prior to and in conjunction with formal treatment.

General Health Services

The Province benefits from the national scheme of free provision of health care at state cost, which provides both preventive and curative care at state health institutions and through the services of Family Health Workers (FHWs) and Public Health Inspectors (PHIs). Geographical access to health care is generally satisfactory. With the exception of a few remote villages whose residents could not access health facilities because of lack of transport, households have access to a health facility within a 3-6 mile radius (JIMOD Survey 2001).

Preventive services are provided in the form of nation-wide immunisation campaigns, dissemination of information pertaining to good health habits, disease identification and after care via the mass media and health personnel working at a rural level.

The Public vs. Private Debate

The numerous 'channel'[2] clinics in Kandy are evidence to the growing number of private health facilities in the district. There has been a notable increase in the number of those who patronise these facilities, which are sought after for outpatient care and investigative services whilst, inpatient care (in all sectors) was obtained from state facilities. Despite the high cost in private medical care, costing at a minimum three times as much as public facilities, the rate of attendance is high. The reasons attributed to this, by both the population and the health personnel are as follows:

- Improved quality of care
- The availability of medication and other facilities in the same place
- Improved delivery of service by health personnel
- Long waiting hours at state facilities
- Better attention by health professionals

" Never mind the doctors; the attendants in government hospitals are very rude. The doctors give us just one glance and prescribe whatever comes to mind."

" We know that private care is expensive and it's a big strain on us (financially) but we get proper treatment. The doctor listens to the background (case history) and is attentive." (JIMOD Participatory Assessment 2001)

Incidence of Disease

Households were questioned regarding the incidence of disease in both the household and community. At the village level, 78.3% of households in all categories reported influenza as the most frequent illness followed by 38% who reported colds and 30% who reported coughs. At the household level 61% indicated the incidence of fever as the most frequent cause of illness, while 50% rated abdominal afflictions as common.

Influenza was the most common illness in all sectors. The estate population reported a higher frequency of asthma, wheezing and other diseases of the respiratory tract and lungs. Other diseases with lower incidence rates included diarrhoea, skin afflictions and rheumatoid ailments. The percentage of those affected by hypertension and ischaemic heart disease was very low. Awareness helped to control the incidence of disease thereby reducing fatality and also preventing outbreaks (such as sore eyes/dysentery) from reaching epidemic proportions.

Table 3: Leading Causes of Hospital Deaths in the Central Province 2000

Disease	District and Rank order		
	Kandy	Matale	Nuwara Eliya
Ischaemic Heart Disease	2	1	2
Cerebrovascular disease	3	4	1
Pulmonary heart disease and diseases of the pulmonary circulation			3
Neoplasms	1		
Diseases of the respiratory system, excluding diseases of upper respiratory tract, pneumonia and influenza	4	2	5
Toxic effects of pesticides		3	4
Symptoms, signs and abnormal clinical and laboratory findings	5	5	

Source: Excerpted from Table 25 - Annual Health Bulletin - 2000

The shift in disease patterns from contagious diseases to lifestyle related ones is evident in that ischaemic heart disease is the leading cause of death in Matale, and the second leading cause of death in Kandy and Nuwara Eliya. Diseases such as tuberculosis which were once considered fatal now fall into the curable category but at the same time there has been a drastic increase in the numbers of those afflicted by the so called diseases of development (i.e. hypertension, diabetes, cardiovascular diseases).

Malnutrition was high in all three districts and across all three sectors. The Nutrition and Health Survey (NHS) between 1993 and 1995 found that stunting (33%) and underweight (40%) were both high in the Central Province.

3. DEVELOPMENTS IN HEALTH CARE

Donor agencies and NGOs play an active role in the health sector in the provision of funds, infrastructure and technical expertise. The WHO is responsible for aid in the form of equipment, vehicles etc. The maternal and child health programmes, are among the most successful programmes in the Province, supported solely by the UNICEF and UNFPA (the government provides only the salaries of the health personnel).

One of the major developments during the past decade has been the reduction of infant and maternal deaths. This has been attributed to the focus on maternal, pre and postnatal care. Clinics for pregnant and lactating mothers and children under 5 years have been conducted with the assistance of VOGs even in rural areas such as Udupusellawa.

The 'Year 2000 Health for All' campaign which targeted a disease free population was implemented in the Province spanning the course of over five years and culminated in 2000. The campaign comprised of 17 components; one of the main realised objectives in the Province was the EPI (Expanded Program of Immunisation). Infant deaths have reached a zero level because of this.

Expenditure on heath care (in proportion to monthly income) has increased considerably (OPDH Kandy). A high level of awareness and knowledge and a shift in disease patterns (i.e. an increase in the incidence of ischaemic heart disease, diabetes and cancer) has led to the increase of the public's expenditure on health. An expectation of a better quality of health care motivates this increased expenditure. Apart from health services a considerable sum of money is also spent on incidental expenses such as transport which are incurred in seeking medical treatment. This trend is visible even in the rural and estate sectors where caregivers even get into debt in order to make optimum care available.

The widespread network of health personnel who operate even in the rural areas have contributed greatly to the increase in the public's knowledge base on health related matters and also on preventive and curative practices. Primary health care is provided by the FHWs in the absence of, and in conjunction with senior level health personnel.

Health education programmes have widened their scope from 'good health habits' to now include education on HIV/AIDS, disease prevention, identification and curative procedures.

Recent developments include the streamlining of the administration of health services, which has increased the efficiency of health service delivery.

4. HEALTH SEEKING BEHAVIOUR

Types of Treatment

95% of the sample said the primary mode of treatment sought was allopathic ("western") medicine. Informal treatment was almost always resorted to before seeking formal care. The widespread availability of analgesics (e.g. Panadol, Siddhalepa) could be a contributory factor. Self-treatment included home remedies and traditional curative/preventive practices (e.g. avoidance of certain foods).

"We take Ayurvedic treatment for 'vaathe' ('wind' disorders). They give a course of medicine that has to be taken for over two to three weeks: the ailment gets cured slowly and totally but in 'English medicine' ("Western" medicine) the cure is immediate but it recurs after some time and there are after effects. (JIMOD Participatory Assessment 2001)

The lessening/rejection of the Ayurvedic treatment of cure for other illnesses was because it was time consuming and did not provide an immediate cure as opposed to Western medicine. The pluralistic approach to health care was evident in the incorporation of two or more methods of curative care. For example, a diabetic would seek 'Western treatment' in the event of a sudden rise in blood sugar levels but would also consume certain herbal decoctions to avert long-term effects of the disease.

Religious practices were also incorporated into healing procedures (i.e. 'bodhi *poojas'* for *'seth shanthi'* well being) and, strictly observed in the event of communicable diseases (termed *'deiyange leda'* or diseases of the gods). Healing rituals consist of a visit to a vital healer or temple priest who provides advice/treatment. About 50% of the total sample surveyed resorted to healing rituals in the event of sickness sometimes in conjunction with other methods.

Sector Variations in Health seeking Behaviour

Table 4: Type of treatment sought by households (%)

Sector	Allopathic	Ayurvedic	Homeopathic	Acupuncture	Healing Rituals
Estate	86	53	6	0	53
LDR	100	86	0	40	86
MDR	100	46	0	0	20
Urban	93	66	6	0	40
All	95	63	3	10	50

Source: JIMOD Participatory Assessment 2001

All respondents, irrespective of the sector had a pluralistic approach to health care. 100% sought allopathic treatment in the "less developed" rural (LDR) and "more developed" rural (MDR) sectors followed by 93% of the Urban and Estate population respectively. A high 86% resorted to healing rituals in the LDRs; comparable to the extent Ayurvedic treatment was also sought by this sector. Only 40% of the urban populace resorted to healing rituals but a considerable percent (66%) also availed themselves of Ayurveda (JIMOD Participatory Assessment 2001). In the estate sector about 53% of the households sought Ayurvedic treatment and healing rituals.

Factors such as expenditure on transport and proximity do not have a negative effect on the seeking of health care. 46.5% use hired transportation to reach the nearest health centre and a high percentage, of 60.45% sought formal treatment from a facility that is not the nearest one. Quality of health care provided was a deciding factor in this instance (JIMOD Survey 2001).

Health seeking behaviour is influenced by the type of morbidity, nature and seriousness of illness and quality of services and medication. It can be surmised that health care is a priority. This in turn is a positive reflection on development trends.

Choice of Treatment Facility

Altogether 84% of the households interviewed in the Participatory Assessment patronised a state health facility, followed by 69% who used a private facility; there was an overlap of 52% who used both. The state health facility was generally considered the safe choice in the case of a serious illness even though there were shortcomings.

"The state health facility has a responsibility to the patients. In private facilities there is no one to take responsibility if something happens." (JIMOD Participatory Assessment 2001)

The proportion of those who used both public and private facilities was highest (60%) among households in the LDR sector; this was due to state health facilities being located too far away in some remote rural areas. The urban sector had the highest proportion (27%) of households, which used only a private facility, with 53% using both public and private facilities, while the first choice of treatment for the other sectors was a state health facility. The estate workers were most dependent on state/estate health facilities (47% of households). However, they had a tendency to bypass the estate health facility in favour of a private facility especially in the event of a serious illness.

Table 5: Household Choice of Treatment Facility (%)

Sector	State only	Private only	Both
Estate	47	7	47
LDR	27	13	60
MDR	33	20	47
Urban	20	27	53
All	32	17	52

Source: JIMOD Participatory Assessment 2001

Apart from the cost, factors such as reliability, and availability of ancillary services medication, X-ray and laboratory facilities etc. influenced decision-making in the choice of health facility. Factors that made users choose private facilities over state health facilities were conveniences such as lesser waiting times, prompt service, availability of medication and better attention by the health personnel.

Changes in Health Conditions/Health care

A majority of the respondents noted a considerable improvement overtime in health care with regard to facilities, services and health education.

In answering the question "How do the health conditions and services compare with those available 10 years ago?" Most of the respondents cited the upgrading of state health facilities, increase in options with the setting up of more private owned facilities and a drastic increase in costs incurred to obtain treatment/purchase of medication.

"It is better than in the past. Medicines are available even for major sicknesses. Technology has improved, all the equipment required for operations are available. People have changed; they know health is more important than anything else." (JIMOD Participatory Assessment 2001)

"The Health Department organised seminars on health awareness. They showed films (video documentaries) *on dengue fever. We met at the temple. Such sessions are organised regularly."* (JIMOD Participatory Assessment 2001)

Changes that they would like to see in the future included better maintenance (i.e. cleanliness) and administration of state health facilities and also the provision of better infrastructure (as part of an overall provincial development plan.)

"By the time we reach the doctor after standing in the endless queue more than half the day is gone. After all that hassle we have to purchase medicines/get tests done from outside."

"..... There are roads linking houses but not outside the village, no transport facilities if someone nearby is seriously ill we have to carry the patient all the way to the nearest bus halt ....." (JIMOD Participatory Assessment 2001)

Assessment of Health Conditions

Overall there is a high level of satisfaction with health conditions 42.50% of the populace have rated the health conditions in their community as 'Good' followed by 35.45% rating it as 'Satisfactory'. Kandy records the highest percentage of responses for the 'Good' category (48.33%). The widespread availability of health care facilities could be a causal factor. The establishment of Kandy as a centre point for health care with the setting up of numerous channelling services, clinics etc. had led to the arrival of people from as far off as Trincomalee and Anuradhapura. Matale recorded the highest percentage (40.83%) in the 'Satisfactory' category.

Table 6: Assessment of Community Health Conditions

Health Condition	Kandy		Nuwara Eliya		Matale		Central Province	
	No.	%	No	%	No.	%	No.	%
Very Poor	8	3.33	12	15	1	.83	21	4.77
Poor	27	11.25	17	21.25	27	22.50	71	16.13
Satisfactory	86	35.8	21	26.25	49	40.83	156	35.45
Good	116	48.33	28	35.00	43	35.83	187	42.50
Very Good	3	1.25	2	2.5	0	0.0	5	1.13
Total	240	100	80	100.0	120	100.0	440	100.0

Source: JIMOD Household Survey 2000

5. HEALTH INDICATORS

Infant Mortality

Infant mortality rates are at 21.5% for Zone 5 (Kandy and Nuwara Eliya) and 20.5% for Zone 4 (Matale). The problem of statistics based on zoning makes Provincial aggregation impossible as Matale belongs to a different zone.

Table 7: Infant Mortality per 1000 Live Births by District, 1990 - 1996

District	1990	1991	1992	1993	1994	1995	1996
Kandy	26.6	26.8	27.6	25.9	26.7	24.0	26.7
Matale	9.7	11.5	9.0	8.3	9.3	10.9	10.6
Nuwara Eliya	38.9	28.9	26.9	27.5	25.4	23.5	23.9
Sri Lanka	19.3	17.7	17.9	16.3	16.9	16.5	17.3

Source: Statistical Abstract 2000

Child Deaths

On a statistical basis Matale district records the highest number of child deaths 13.77% followed by 9.11% for Nuwara Eliya and 8.18% for Kandy. Underdevelopment accounts for the leading cause of death in the Province with a provincial percentage of 21.41% followed by stillbirth (13.45%). Disease/affliction ratios are relatively lower with 1.81% recorded for diarrhoea.

Mental Health

The area of mental health has been a much-neglected one even on a national level. Although the causal factors for the phenomenon are many, the provision of clinical treatment for mental conditions has been haphazard. The government is in the process of updating the Mental Health Act and is training more personnel in psychiatry. There is a considerable populace in the Central Province who suffers from some form of mental disorder/aberration, the biggest problem being the non-availability of related medical services and competent personnel.

The setting up of the Mental Health Unit in the Nuwara Eliya Base hospital fulfils a long-standing requirement considering that suicide by consumption of poisons is the leading cause of death in Matale and that 60% of deaths in the Nuwara Eliya district were suicide related (DPDHS Matale and Nuwara Eliya).

Cultural barriers have also contributed to the delay in identification and implementation of necessary interventions. Mental illnesses carry a social stigma and thereby contribute to a 'hidden population' who need medical recourse but do not access it.

Suicide

The incidence of suicide in the Province is quite high and this can be correlated to nationwide statistics (the country rated the highest rating in the late 1990s in the world for deaths by suicide). Health personnel in the Province attributed this to the non availability of systemised counselling / awareness programmes.

Reasons for committing suicide

Domestic conflict was the leading reason (49.44%) for suicide with unsuccessful love affairs coming second (20.57%). Within the category of domestic conflict, fight with spouse had a percentage of 20.36%. Economic difficulty was not a leading cause though generally assumed to be so. There is in fact, a significant disparity between the leading reason and economic difficulty. The incidence of those not reporting suicide (as the cause of death) is 67.12% greater than the 32.87% who do report.

Table 8: Factors contributing to Death by Suicide

Reason	Percentage
Economic difficulty	15.88
Domestic conflict/discord	49.44
Mental Illness	7.83
Unsuccessful love affairs	20.57
Other	5.15

Source: JIMOD Household Survey 2001
N.B provincial percentages

Methods of suicide

The consumption of pesticides was the leading method of suicide in all three districts Kandy 66.78%, Nuwara Eliya 76.72% and Matale 76.69% (see Table 8). The free availability and easy access to pesticides and other agrochemicals makes this the favoured method. A marginal percentage of 0.37% die of drug overdoses. On a sectoral basis the Estate sector recorded the highest number of suicides (15.38%).

Table 9: Method Employed for Suicide

Health Condition	Kandy		Nuwara Eliya		Matale		Central Province	
	No.	%	No	%	No.	%	No.	%
Hanging	60	20.13	7	6.03	11	8.27	78	14.26
Drowning	16	5.37	12	10.34	4	3.01	32	5.85
Eating poisonous plants	3	1.01	3	2.59	9	6.77	15	2.74
Jumping onto moving train/ vehicle	0	0.0	0	0.0	1	0.75	1	0.18
Drug overdose	2	0.67	0	0.0	0	0.0	2	0.37
Consumption of pesticides	199	66.78	89	76.72	102	76.69	390	71.30
Other	18	6.40	5	4.31	6	4.51	29	5.3
Total	298	100.0	116	100.0	133	100.0	549	100.0

Source: JIMOD Household Survey 2001

Prevalence of suicide

According to Table 9, suicides were generally more prevalent in Kandy and Matale districts with 92% of GN units reporting suicide. In contrast, approximately 88% of GN units reported suicide the Nuwara Eliya district.

Table 10: Number of Suicides Reported in GN Units by District

Incidence of suicide	Kandy		Nuwara Eliya		Matale		Central Province	
	No. of GNs	%	No. of GNs	%	No. of GNs	-%	No. of GNs	%
0	2	8.3	1	12.5	1	8.3	4	9.1
1-2	4	16.7	0	0	4	33.3	8	18.2
3-4	6	25	1	12.5	4	33.3	11	25
5-6	9	37.5	4	50	2	16.3	15	34.1
7-8	1	4.2	1	12.5	0	0	2	4.5
9-10	2	8.3	1	12.5	1	8.3	4	9.1
>10								
Total	24	100	8	100	12	100	44	100

Source: JIMOD Household Survey 2001

In both Kandy and Nuwara Eliya districts the number of suicides per community reported by GN divisions were predominantly in the 5-6 range (38% and 50% respectively). In Matale district the most frequent number of suicides per community reported was in the 1-4 range (67%). Thus, suicide in terms of the numbers involved appears less prevalent in Matale district than in the other two districts.

Table 11: Total Number of Suicides Reported in GN Units by Sector

Incidence of suicide	Rural		Estate		Urban		Central Province	
	No.	%	No.	%	No.	%	No.	%
1-2	115	68.45	19	36.53	14	26.0	148	54.22
3-4	28	16.66	19	36.53	8	32.0	55	27.11
5-6	18	10.74	8	15.38	3	12.0	29	12.88
7-8	4	2.36	0				4	1.77
9-10	3	1.78	6	11.53			9	4.0
>10	0							
Total	168	100.0	49	100.0	25	100.0	245	100.0

Source: JIMOD Household Survey 2001

Considering sector-wise prevalence, 68% of suicides reported in rural GN units were in the range of 1-2 per community. In the estate and urban GN units 37% and 32% respectively of suicides reported were in the range of 3-4 per community. Thus, suicide in terms of numbers seems less prevalent in rural, rather than estate and urban sectors.

6. LIVING CONDITIONS

The sectoral divide is evident in the living conditions, housing facilities and infrastructure availability. The Urban and MDR categories have access to most facilities whilst the other two categories namely, the LDR and Estate categories have very limited access to facilities. Considering that the Urban sector is geographically contiguous, it is easy for development programmes to target them. It is the villages in the rural sector which are neglected/cut away from mainstream and infrastructure development activities. This in turn affects overall living and health conditions.

Housing and Household Assets

The proportion of households by type of construction of dwelling, by source of energy for cooking and lighting, by district and Province, is listed below.

Table 12: Housing Conditions in the Central Province

	Kandy	Matale	Nuwara Eliya	Central Province
Floor type of the house by district and Province				
Permanent	71.25	52.37	63.75	66.37
Temporary	28.75	41.66	36.25	33.63
Roof type of the house by district and Province				
Permanent	98.13	98.33	97.50	62.04
Temporary	2.5	1.66	2.5	37.95
Wall type of the house by district and Province				
Permanent	77.5	81.66	80	79.09
Temporary	22.5	18.35	20	20.91
Source of energy for cooking by district and Province				
Fire wood	88.3	94.16	81.29	88.65
Kerosene	2.08	0.83	6.25	2.5
Electricity	0	0.83	0	.22
LP Gas	8.75	4.16	11.25	7.95
Charcoal/Biogas	-	-	1.25	.22
Saw Dust				.22
Other	.81	-	-	.22
Source of energy for lighting by district and Province				
Electricity	72.50	58.33	32.50	65.00
Solar	0.41	0	2.5	.68
Kerosene	26.66	35.83	43.75	32.27
Bio-gas	0	0	0.27	0
Other	.41	.83	0	.45
Nil	-	5.00	1.25	1.36

Source: JIMOD Household Survey 2001

With reference to the structure of the household, overall most households in the province have permanent roofing and walls, while the proportion of households with permanent flooring is higher in Kandy district, followed by Nuwara Eliya district.

In terms of energy sources for food preparation, although most people use firewood in all three districts, this is highest in Matale. Residents in Kandy use electricity and kerosene as their main sources of energy. On the other hand most in Nuwara Eliya district use kerosene while many others use electricity. Solar power and biogas are hardly used.

Table 13: Household Assets in the Central Province

Assets	Kandy	Matale	Nuwara Eliya	Central Province
Radio/tape recorder	78.3	70	73.8	75.2
Television	65.4	55	62.5	62.0
Video Deck	12.9	13.3	13.8	13.1
Sewing machine	36.3	30	36.3	34.5
Refrigerator	18.3	13.3	12.5	15.9
Electric fan	19.6	15.8	7.5	16.3
Washing machine	4.2	5	5	4.5
Air conditioner	0.8	0	1.3	0.6
Computer	2.5	1.7	1.3	2.04
Telephones	10	8.3	10	7.27
Cellular phone	6.6	3.3	3.8	5.22
Bicycle	10.4	40	11.3	18.6
Scooter/motor cycle	5	8.3	1.3	5.22
Three wheeler	1.3	2.5	1.3	1.59
Motor van /car	4.6	0	01	2.5
Other motor vehicles	2.9	1.7	2.5	2.5

Source: JIMOD Household Survey 2001

Across the Central province most residents own appliances such as the radio or tape recorders, television and sewing machines. Apart from vehicles, Matale district indicates a lower level of ownership of household assets than the other two districts. Overall in the province, there is low ownership of vehicles, computers and cellular phones. Only 7.2% have telephone facilities. However, the Participatory Assessment revealed that most households had access to telephones and fax machines at nearby communication centres or owned by neighbours. Communication by telephone has risen due to the increasing number of household members employed outside the community, both within Sri Lanka and abroad.

Water and Sanitation

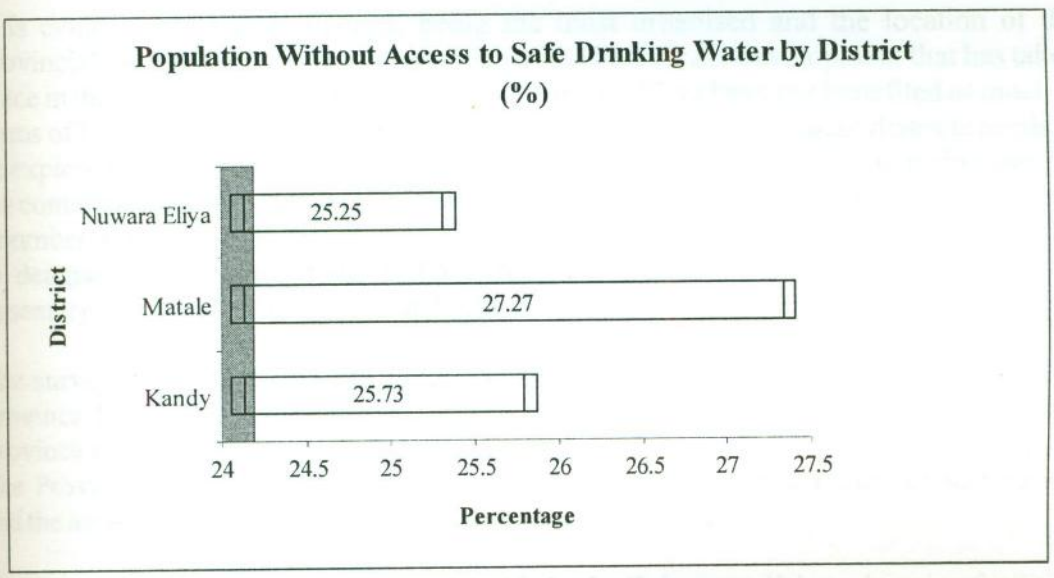
Water purification is very poor because of storage problems. More than half the percentage of the population (54%) obtains water from the main pipelines and is at risk of contracting diseases because of using contaminated water. Though the authorities have identified these problems, no clear-cut measures have been proposed to resolve them.

However, the while the use of pipe borne water for drinking is high, it is less so for bathing purposes, with around 33% of households obtaining water for bathing from a river/tank and 32% from wells.

Table 14: Source of Water for Drinking

Health Condition	Kandy		Matale		Nuwara Eliya		Central Province	
	No.	%	No	%	No.	%	No.	%
Pipe Borne Water (Water pump)	66	20.90	20	16.67	33	41.25	119	27.04
Pipe Borne Water	55	25.00	33	27.50	31	38.75	119	27.04
Own Well	39	17.73	23	15.17	5	6.25	67	15.22
Communal Well	44	20.20	22	18.33	8	10.0	74	16.81
Tube Well	12	5.45	16	13.33	0	0.0	28	6.36
River/Stream/Tank	3	1.36	2	1.67	1	1.25	6	1.36
Other	21	9.54	4	3.33	2	2.5	27	6.13
Total	24 0	100.0	120	100.0	80	100.0	440	100.0

Source: JIMOD Household Survey 2001



Source: National Development Report UNDP-'98

Sanitation facilities are satisfactory with a total of 67% households having water seal toilets. However, sanitation remains unsatisfactory within the estate sector. Around 11% of households in the Nuwara Eliya district have no toilet facilities, while only 58% have water seal toilets

Table 15: Type of Latrines of households by District and Province

Type	Kandy (%)	Matale (%)	Nuwara Eliya (%)	Central Province (%)
Water Seal	68.33	70.83	57.5	67.04
Flush Toilet	4.16	2.5	7.5	4.31
Bucket	8.75	2.5	7.5	6.81
Pit	15.83	17.5	16.25	16.36
None	2.91	6.66	11.25	5.45

Source: JIMOD Household Survey 2001

Thus, the JIMOD survey data reveals that the overall improvement in housing structures, and access to infrastructure, such as pipe-borne water and electricity in the Central Province, has been accompanied by a general improvement in sanitation and conditions of hygiene. This is corroborated by most households, which rated the health conditions in their community as generally good.

7.CONCLUSIONS

It is evident that Kandy district, being the most urbanised and the location of the provincial capital has benefited from much of the health care development that has taken place in the Province. In contrast Matale and Nuwara Eliya have not benefited as much in terms of health care, and the health condition of the population in these districts needs to be explored and addressed. At the same time a major cause for diseases in the Province is the contamination of water largely due to poor storage and preservation that gives rise to a number of water borne diseases. In recent times the Province has also been susceptible to dengue, while some districts have seen high incidences of hepatitis, bacillary dysentery, gastroenteritis, asthma and tuberculosis.

The survey found that with the exception of a few remote villages, households in the Province have access to a health facility within a 3-6 mile radius. Furthermore the Province benefits from the national scheme of free provision of health care at state cost. The Province is also serviced by immunisation campaigns, information dissemination and the assistance of health personnel at the rural level.

The study found that there is a sectoral divide in **the living conditions**, housing facilities and infrastructure with the urban sector receiving targeted development programmes while rural villages are cut away from mainstream and infrastructure development activities. It is evident that this in turn affects overall living and health conditions.

A main cause for concern is the storage problems that result in a poor quality of water. Consequently accessing water through the main pipeline leaves people susceptible to diseases as a result of exposure to contaminated water although many obtain water for bathing from a river, tank or a well. Hence although there is no scarcity of water in the Province the problem of purification needs to be addressed.

An overview of **health related indicators** exemplifies that while adult illiteracy is high in the Central Province, notable proportions of the population lack access to basic facilities such as electricity, hygienic sanitation and safe water. Furthermore there is a realisation that the IMR can be further reduced in the Province. The decreasing prenatal and mortality rates in Kandy and Matale are attributed to the increase in the levels of awareness and education.

The **tea estate community**, a large majority of the provincial population, are forced to deal with poor infrastructure, income, literacy and unhygienic living conditions that contribute to their low level of health. The most common diseases in this sector are communicable diseases that often reach epidemic proportions. Many children suffer from dystrophy and malnutrition while the estates lack female Estate Medical Assistant indicating that maternal and child health is far below provincial standards in the estate sector. From an institutional perspective although health care comes under the purview of the estate management estate health facilities is in the process of being integrated into the National Health Service by the Ministry of Health. Another aspect that should be taken into account is that estate residents are firm believers in traditional healing practices that they tend to use prior and in conjunction with formal treatment.

Examining **the private health facility** debate shows that these health facilities and the proportion of those who patronise them primarily for outpatient care and investigative services, especially in Kandy is noteworthy. The improved quality of care, facilities and attention, and service delivery, are reasons cited for this preference. On the other hand most often people in the Province obtained inpatient care from state facilities.

Disease occurrence indicates that influenza, colds and coughs have the highest incidence in this region while diarrhoea, skin afflictions and rheumatoid ailments, hypertension and ischaemic heart disease occur less regularly. Greater awareness is believed to contribute to low disease incidence and outbreak prevention. Concurrently there is a shift in disease patterns from contagious diseases to lifestyle related ones considering that ischaemic heart disease is common cause of death in the Province along with a drastic increase in those inflicted by diseases of development hypertension, diabetes, cardiovascular diseases. There are high levels of malnutrition, stunting and wasting in the districts.

Expenditure on health care has increased considerably and can be attributed to high level of awareness, a shift in disease patterns and is motivated by a high expectation of a better quality of health care. People have no qualms about spending extra on transportation and are even willing to get into debt to take advantage of the care available.

Most people seek allopathic treatment but also resort to home remedies and traditional curative and preventive practices, although the usage of traditional methods is on the decline due to them being time consuming and not providing an immediate cure. Yet a pluralistic approach for curing ailments or incorporating religious practices into healing procedures is hardly ever ruled out.

Sectorally health-seeking behaviour is influenced by the type of morbidity, nature and seriousness of illness, the quality of services, and medication. This indicates that health care is a priority signifying a positive reflection on development trends. Furthermore the cost, reliability, the availability of ancillary services and the quality of the services provided by the facility rather than the proximity influenced the choice of health facility.

In the three sectors, most patronise a state health facility, which they considered a safe choice for serious illnesses despite its shortcomings, although many prefer a private facility. However, the majority of households in the urban and less developed rural sectors used both private and public facilities. A bigger proportion of urban households frequented only a private health facility whilst other sectors had a higher percentage of households who only used a state health facility. Around half of the estate households tended to bypass the estate health facility in favour of a private facility especially for a serious illness.

Most people in all sectors felt that there was considerable improvement overtime in health care with regard to facilities, services and health education. They perceived that in the last ten years health facilities had been upgraded along with an increase in privately owned facilities and costs in obtaining treatment and purchase of medication. Additionally, people indicated that the cleanliness and administration of health facilities, and improved infrastructure as a part of an overall provincial development plan are issues that need to be addressed. These views indicate that overall there is a high level of satisfaction with health conditions in the Province, which may be attributed to the widespread availability of health care facilities.

An observation of the **health indicators** shows that from 1990 to 1996 the infant mortality rate in the Kandy and Matale districts has remained relatively static while it is on the decline in Nuwara Eliya. Moreover, Matale district records the highest number of child deaths with underdevelopment and stillbirth accounting for the highest number of deaths provincially.

The populace in the Central Province suffering from forms of mental disorder/aberration cannot go unnoticed with the biggest problem being the non-availability of related medical services and competent personnel. The establishment of the Mental Health Unit in the Nuwara Eliya Base hospital has certainly fulfilled a longstanding vacuum considering that suicide is the leading cause of death in Matale and Nuwara Eliya. Yet cultural barriers and the stigma attached to mental illness continue to contribute to the delay in identification and implementation of necessary interventions.

The suicide rate in the Province is high due to the non-availability of counselling and awareness programmes with domestic conflict and unsuccessful love affairs being cited as the major causes of suicide. The use of pesticides is the most common manner of committing due to its widespread accessibility with the estate sector recording the highest number of suicides.

8. RECOMMENDATIONS

There is a need for the overall health policies that have been proposed and the interventions planned for the development of health care in the Central Province to be implemented. Although block amounts have been obtained from donors in the form of aid, there is no specific plan for the utilisation of these funds. This has resulted in overspending in certain areas of health care and negligence in others.

The administration of health services needs to be free of political interference and bias. One of the other allegations levelled is that the Western Province monopolises most of the training and capacity building activities.

There has been some effort at expanding the provision of health facilities and programmes into the rural areas; this needs to be maintained.

A focus on equitable access to health care becomes increasingly more important, especially given the high cost implications for secondary and tertiary health care associated with the country's epidemiological transition from contagious to lifestyle related diseases.

The linkage between access to health care and infrastructure facilities needs to be recognised with developments keeping pace in both areas.

Overall, the development taking place in health care has to become area and programme specific, as well as expedited, especially where needs are urgent.

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