

HEALTH AND FOOD SECURITY

(Case Study on Three Ethnic Minority Groups in Mountainous Area of Vietnam)

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I. Introduction

Food security and community health care have a close relationship. This relationship is evaluated by two indexes which are poverty and malnutrition. There are about 2.8 million people among 6 billion people all over the world who are living on less than 2 USD/day. This is half of world population; and about 1.2 million people are living on less than 1 USD/day- this standard is considered *absolute poverty*. About 44% of the world population living in absolute poverty resides in the South Asian countries. The death rate of children under five years old is nearly 1%, and the rate of malnutrition of those children is 5% in rich countries while this rate is over 50% in poor countries. At least 12 million people around the world die each year from malnutrition, two third of them being children (The National Politic Publisher 2003).

Vietnam is one of the poorest countries in the world. In 2005, the rate of poor households was 22%, and the rate of malnutrition among children under five years old was 25% (Ministry of Investment and Planning 2006). According to The National Survey of the Institute of Nutrition in 2000, the average energy of Vietnamese people is 1,931 calories/person/day. In the whole country, 34% of children under five years old have iron-deficiency. This rate is

70% in the poor areas. After the Renovation-*Doi Moi* (1986), Vietnam became the second fastest growing country in the area of economic development in Asia (following China). The 10th conference of the Vietnam Communist Party affirms the aim that Vietnam will stand out among the list of poor countries in 2010 and become an industrialized country in 2020 (Vietnam Communist Party 2006). Along with economic development, the quality of health care has improved significantly. To enhance the health of the people is not only the task of the Ministry of Health, but also the task of the whole society.

This study considers the relationship between health care and food security of three communities, they are the Dao people in Bac Kan province, the Muong people in Hoa Binh province and the Tho people in Nghe An province. The main contents are: (1) Health care situation in those areas; (2) The factors affecting the health care of ethnic minorities; (3) The influence of health on food security and how they cope with food shortages in the household.

II. Literature review

According to WHO/UNICEF, the leading causes of child death are by the common diseases such as diarrhea, pneumonia, and malnutrition, all of which are preventable and treatable (WHO and UNICEF 2006).

Globally, 50% of child deaths are related to malnutrition. Globally, malnutrition was related to 61% deaths of diarrhea, 57% deaths of malaria, 52% deaths of pneumonia, 45 deaths of measles.

About 20% of the population in East Asia does not have clean water for drinking and cooking; about 1 billion people are living in unhygienic conditions. Those factors are related to 90% deaths caused by diarrhea. The countries that have the lowest rate of people with access to clean water have the highest death rates among children under five years of age. Additionally, there is a significant difference between regions and between urban and rural areas.

In Vietnam, 75% of the population live in rural areas, and 92,1% of the population is over 10 years old. However, the health care system for people in Vietnam that has been developed is tantamount to other countries that have higher income. The malnutrition rate of children under five years- an important index related to poverty- was reduced from 50% in 1990 to 25% in 2005. The death rate among children under one year of age was reduced from 46‰ in 1990 to 18‰ in 2005. The death rate among children under five years of age was reduced from 58‰ in 1990 to 28‰ in 2005 (Ministry of Planning and Investment 2006). The child death rate in Vietnam is similar to the rate of countries where their income is higher than Vietnam's income by two or three times. Vietnam has attained some achievements: Life expectancy of

Vietnamese people is 71.3; 99% of communes have a health center; 68% of communes and 62% of rural households have clean water. The Government has provided the program of medical check up and treatment free of charge for poor people (The Decision N^o 139/2002/QĐ-TTg, on 15/10/2002). According to the household survey in 2004, 7.32% of poor people have undergone medical treatment during the last 12 months from the time of survey. This rate among rich people was only 6.57%.

Vietnam began implementing the National Program on eradicating hunger and alleviating poverty in July 1998. Due to the efforts of the program, the poverty rate was reduced from 58.1% in 1993 to 22% in 2005. The reduced rate is equivalent to 30 million Vietnamese people getting out of poverty. However, over 90% of households living in poverty are located in rural areas, especially in North West, North East, North of Central Coast and Tay Nguyen areas. In those areas, 65% of ethnic minorities are living in poverty.

III. Results and discussions

3.1. Health situation in three study settings

3.1.1. Who are the sickness people? Health care situation in the study settings.

According to the report of the commune health center in the study settings, 0-4 year old children and adults over the age of 50 years become sick more regularly than other groups. On the contrary, the 15-35 year old group had the lowest sickness rate. These

results can be explained by observing that the 15-35 year old period is the strongest period in the life cycle. At that time, the body has the capabilities to self-resist diseases. Women suffer diseases more frequently than men, 60% compared with

40%. Some reasons can be attributed to, for instance, the changing health of a woman during pregnancy and women have to work longer and harder than men. In addition, men acquired health services less frequently than women.

Table 1: Health situation of household heads

	Economic situation of household				Total
	Rich	Middle	Poor	Poverty	
Healthy	12	36	28	7	83
	57.1%	46.2%	43.8%	33.3%	45.1%
Normal	9	35	25	6	75
	42.9%	44.9%	39.1%	28.6%	40.8%
Illness	0	7	11	8	26
	0.0%	9.0%	17.2%	38.1%	14.1%
Total	21	78	64	21	184

Source: Survey of the Project, 2005.

Table 1 shows that, among rich households, 51.7% household heads are healthy and nobody is ill. However, among households living in poverty, only 33.3% of household heads are healthy and 38.1% household heads are ill. Similarly, 17.2% poor household heads are ill.

Normally, the illness rate among the high income group is lower than the rate among low income groups. Wealthier families can afford more rich and nutritious foods, while poorer families can not. Theoretically, the rich people are healthier than the poor people.

This point of view is proven by the statistic data in the Living Standard Survey in 1998. The illness rate among the group of people having low average expenses per head (42.9%) is higher than this rate in the group of people having high average expenses per head (39.3%). The illness rate of men among the rich group is 34.8%, but the rate of men among the poorer group is 41.1%. The illness rate in rural area is 42.4%; in urban areas 38.7%. The reasons attributed to the high illness rate are low living standards, hard work, and low education level.

Table 2: Some indicators of three study settings compared with the whole country

Indicators	Bac Kan		Hoa Binh		Nghe An		Whole country
	Tan Son Commune	Lu Village	Nam Son Commune	Chien Village	Giai Xuan Commune	Ke Mui Village	
Population (2005)	1,350	303	1.564	337	7.887	901	84 millions
Birth rate 2005 (‰)	18.5	26.4	12.8	12.0	14.8	17.8	17.5
Malnutrition rate of children under 5 years	23.1%	17.2%	27.0%	24.2%	27.0%	22.3%	25,0%
Poverty household rate (according to the New Standard)	49.3%	60.0%	62.5%	63.5%	51.1%	39.6%	22,0%

Source: Survey of the Project, 2005; General Statistics Office.

In Table 2, the rate of poverty among households of the study settings is higher than the rate of the whole country by two to three times. However, the birth rate and the malnutrition rate of children under five years are similar to or less than the rates of the whole country. The statistic data and the reports of the study settings indicate that public health care, especially in regards to family planning tasks have been successful, contributing to the reduction of the birth rate and malnutrition rate. The household survey in the study settings show that among the households having children suffering from malnutrition, 2.6% are rich, 28.2% are middle, 48.7% are living in poor, and 20.5% are poverty; 79.5% household having malnourished children did not have enough rice in 2004, in which, the highest rate is 95% in Ke Mui village, and 91.7% in Chien

village. However, in Lu village, 14.3% of malnourished children belonged to households living in poverty, and 85.7% malnourished children lived in non-poverty households. Besides the food shortage, illness and not having the ability to feed children were the causes of malnutrition.

3.1.2. Illness and diseases

In the study settings, the most common disease was influenza. The highest rate was 23.8% (compared with the number of medical exams) in Tan Son, and the lowest rate was 3.3% in Nam Son. In Nam Son, the rate of malaria was 2.0% and the rate of diarrhea was 2.4%. Those rates in other communes were only under 1%. It is explained that Nam Son is located at a higher altitude compared to other communes, and the sanitation conditions of the village are very

poor. In Tan Son, the rate of pneumonia and bronchitis is 2.2%, which is higher than other communes. The lower temperatures in the winter can be the cause of the high rates of acute respiratory infections. The rate of diarrhea in the three study settings is very low compared to the rate in the whole

country. To explain this phenomenon, the commune health staff attributes this to the improved awareness of people in those communes on drinking water and sanitation. Unlike some years before, people now drink boiled water.

Table 3: Medical exams and treatment, and some common diseases

N°	Information	Tan Son		Nam Son		Giai Xuan	
		Number	%	Number	%	Number	%
A	General activities						
1	Total population	1,350	-	1,564	-	7,887	-
2	Total number of medical exams and treatments	1,347	100.0	1,050	100.0	3,459	100.0
	- Medical exams per total population	-	99.8	-	67.1	-	43.9
3	Total number of gynecological examines	133	9.9	213	20.3	628	18.2
	- Total number of gynecological treatments	33	2.4	27	2.6	285	8.2
	- Gynecological treatments per gynecological examines	-	24.8	-	12.7	-	45.4
4	Total number of in-patient visits	117	8.7	80	7.6	86	2.5
	- Total number of out-patient visits	1230	91.3	970	92.4	3373	97.5
B	Common diseases						
1	Influenza	68	5.0	250	23.8	115	3.3
2	Acute respiratory infection	29	2.2	6	0.6	16	0.5
3	Pneumonia/bronchitis	29	2.2	13	1.2	16	0.5
4	Malaria	9	0.7	21	2.0	3	0.1
5	Diarrhea	2	0.1	25	2.4	10	0.3

Note: The rates are calculated by the number of cases per the total number of medical exams.

Sources: The reports in 2005 of Commune Health Centers.

Table 3 shows that the medical exams per total population in Tan Son are 99.8%, which is highest among the three study settings; 67.1% in Nam Son; 43.9% in Giau Xuan. The rate of gynecological treatments per gynecological exams in Giau Xuan is 45.4%, 24.8% in Tan Son, and 12.7% in Nam Son.

Table 4: The impact of food shortage to nutrition and health

Indicators	Food shortage household	Enough food household	Total
Family members suffer respiratory infections, malaria	34 (66.7%)	17 (33.3%)	51 (27.7%)
Stunted children	23 (79.3%)	6 (20.7%)	29 (15.8%)
Female (especially pregnant women) are pale	14 (87.5%)	2 (12.5%)	16 (8.7%)
Low birth weight	6 (85.7%)	1 (14.3%)	7 (3.8%)
Mentally deficient children	5 (71.4%)	2 (28.6%)	7 (3.8%)
Mental deficiency at birth	4 (66.7%)	2 (33.3%)	6 (3.3%)
Others	38 (84.4%)	7 (15.6%)	45 (24.5%)

Sources: Survey of the Project, 2005

The food shortage clearly impacts the nutrition and health among the surveyed households. 27.7% of the surveyed households have members, especially the children, suffering from respiratory infections, malaria, and two third of this number belong to those households with food shortages. 15.8% of surveyed households have stunted children, 79.3% among them are in households with food shortages. Other nutrition and health related problems have occurred among members of households with food shortages ranged from 60 to 80% (Table 4).

3.1.3. The source of medical service supplements and the priority policies

3.1.3.1. Modern medicine

In Vietnam, the health care system from the Center to the commune was established intermediately after the country became independent in 1954. The commune health centers in these three study settings were set up in the 60s of the previous century. However, at that time, each commune health center had only one to two staff, some medical equipment and very little medicine. The head offices were located in the private houses. Hence, the services

were very poor and the number of patients was low. After the Renovation (the end of 1980s and the early 1990s), the commune health centers were repaired and expanded, and equipment and medicine were supplemented.

The health care services were changed after the Government created programs to provide free medical examinations and treatment for poor people (Program 139) in 2002. This Program was implemented in Giai Xuan and Tan Son, but it has not been applied in Nam Son. According to the authority leaders, the commune health staff,

and the inhabitants, this policy does not apply to them. Only the medical examination is free, while they have to pay for the medicine. Everyone, including children less than six years, has to pay for medical treatment in the commune health center even though the children under six years are to receive medical examinations and treatment free of charge according to the regulation of Government. However, they did not have to pay for exams and treatment at the district or provincial health centers

Table 5: Using medical services and economic condition of households

Place of medical treatment	Economic situation of households				Total
	Rich	Middle	Poor	Poverty	
Village health staff	1	3	4	1	9
	8.3%	5.6%	8.9%	6.7%	7.1%
Commune health center	5	16	16	6	43
	41.7%	29.6%	35.6%	40.0%	34.1%
Hospital	4	29	21	8	62
	33.3%	53.7%	46.7%	53.3%	49.2%
Healer	0	0	2	0	2
	0.0%	0.0%	4.4%	0.0%	1.6%
Self-treatment	2	6	2	0	10
	16.7%	11.1%	4.4%	0.0%	7.9%
Total	12	54	45	15	126

Source: Survey of the Project, 2005

According to the Living Standard Survey in 2004, 17.1% poor households had medical treatment in the commune health centers; this rate among rich households is 3.6%. Conversely, 3.3% of poor households used private health services; this rate among rich households

is double (7.1%). In this study, there is no remarkable difference in the choosing of medical treatment location (table 5). The results can be explained with the following reasons: the economic situation of households was divided into four groups (rich, middle, poor, and impoverished) but

the actual differences between these groups is not so much. The three study settings are among the list of the National Program on eradicating hunger and alleviating poverty (Program 135 of the Government). Thanks to this Program, the living conditions of people have been improved considerably. Furthermore, the sample size of this study is small compared with the Living Standard Survey

3.1.3.2. The role of traditional medicine

The traditional medicine of Tho, Muong, and Dao people has existed for many generations. At present, Ke Mui village (Nghé An province) has six healers, Lu village (Bac Kan province) has four healers, and Chien village (Hoa Binh province) has two healers. Noticeably, many villagers are knowledgeable of the folk remedies used to treat common diseases such as cold, influenza, eruption, cough, fever, etc.

The remarkable characteristics of traditional medicine are interdependent. In former times, if there was a sick person in the family, the family members went to the healers to take the traditional medicine. However, they did not have to pay money or any compensation. When the patient recovered, they bought alcohol, rice or chickens to the healers to express their

gratitude. In some cases, they brought these to the healers upon their first visit and after they recovered.

Although there are many healers and the role of traditional medicine can not be denied, the cooperation of modern medicine and traditional medicine has not been established. The healers practice medicine spontaneously and the medical branch has not managed them. The Ministry of Health encourages 20% of patients to be examined and treated by traditional medicine at the commune health centers, but there is no traditional medical doctor present as well as a plan to develop the traditional medicine methods in these centers.

3.1.4. Health expenses

The Decision N^o 139 of the Government on free medical check ups and treatment for poor people influences the health care situation. However, the Decision stipulates that the fee must be worth a maximum 15,000VND/person/month and 70,000VND/person/year. This amount of money is extremely minimal for a patient with a serious illness. Furthermore, some healthy people are still able to go to the health center for check ups and receive the medicine of their portion.

Mr. Dat is 76 years old and his wife, Mrs. Quy, is 54 years old in Chien village (Hoa Binh province). They do not have children and they adopted a child. He has had a recurring stomachache for over 20 years. In recent years, he has had serious pain but had to treat the disease in the commune health center because he could not afford to be hospitalized. Recently, when he became ill, his family had to sell 15 chicken and corn to earn the 500,000VND needed to treat him. His wife also gets ill frequently. His family is becoming poorer.

Table 6 shows that, from 1994 to 2002, the Vietnamese government's investment in health was very low; it makes up 3-5% of the National budget compared to the 64.1% allocated to the education budget (1994). Additionally, the investment was significantly reduced in the next few years.

Table 6: Expenses for social affairs in Vietnam (% compared with National budget)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Expenses for social affairs	32.0	33.0	32.3	33.4	33.3	30.2	29.8	31.3	29.7
Expenses for education	7.8	8.6	8.7	10.1	10.2	9.4	9.6	10.1	10.4
Expenses for health	5.0	4.4	4.4	4.3	4.1	3.7	3.4	2.9	3.0
Salaries and allowances	13.3	13.5	13.0	13.0	11.7	10.6	10.4	11.2	9.3
Others	5.8	6.9	6.1	6.1	6.7	6.4	6.4	7.1	7.0

Source: Vietnam Development Report 2004. Based on the estimation of the Ministry of Finance.

Note: The data is calculated by the percent proportion of the Government's total expenses.

According to WHO, the expenses for health in Vietnam is 7USD/person/year, only higher than Lao and Cambodia in the Southeast Asia (5USD), and lower than other countries. The Living Standard Survey 2004 shows that the average expenses/person/month is 359,690VND, in which the expense of the rich group is

715,220VND, which is four times higher than the poor group (160,420VND). The average expense for health/person/month is 25,300VND, in which the expense towards the health of the poor group is 11,040VND, which is one fifth compared with the expenses towards the health of the rich group (51,080VND).

Table 7: The Average of expenses/person/month divided by income groups

Unit: thousand dong

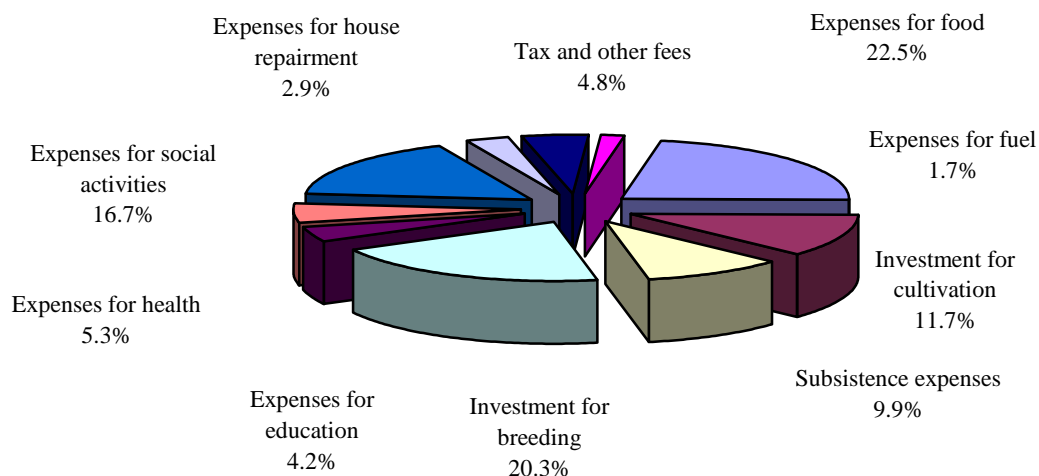
Expenses	Total	Income groups				
		Group 1	Group 2	Group 3	Group 4	Group 5
Whole country	359.69	160.42	225.99	293.84	403.92	715.22
<i>Expenses for eating, drinking and smoking</i>	<i>192.47</i>	<i>106.62</i>	<i>138.16</i>	<i>169.18</i>	<i>213.19</i>	<i>335.61</i>
Cereal	45.66	43.18	45.79	46.40	46.24	46.72
Food	98.73	47.60	68.57	87.50	113.12	177.11
Fuels	9.97	7.14	7.79	8.68	10.84	15.41
Eating out	27.57	4.17	9.87	17.99	31.60	74.32
Drinking and eating	10.54	4.53	6.14	8.62	11.39	22.06
<i>Others</i>	<i>167.22</i>	<i>53.80</i>	<i>87.84</i>	<i>124.66</i>	<i>190.73</i>	<i>379.61</i>
Clothing and shoes	16.39	8.25	11.42	14.15	18.51	29.64
Fees for house, electric, and sanitation	14.87	4.13	6.63	9.95	15.51	38.18
Facilities and furniture	32.68	10.68	17.65	25.69	38.30	71.17
Health care	25.30	11.04	16.33	20.19	27.93	51.08
Transport and post	38.80	7.72	14.94	26.92	46.82	97.74
Education	22.75	8.13	13.80	17.91	27.47	46.52
Culture, sport, and entertainment	4.52	0.21	0.53	1.21	3.43	17.25
Other services	11.91	3.63	6.52	8.63	12.77	28.03

Source: Household Living Survey 2004

The expenses of the household in the three study areas indicate that the expenses for health make up 5.3% and the expenses for education is 4.2%. These indicators are

lower than the indicators in the Living Standard Survey 2004 (the expenses for health is 7.0% and the expenses for education is 6.3%).

Diagram 1: The average of expenses/household/month in study areas



3.2. The factors affect health care and causes of diseases

3.2.1. Poverty and nutrition

Nutrition is an essential demand of human beings. The demand is expressed in two ways: quantitative and qualitative. The demand is changed by sex, age, and labor level. Food in company with regiment, ration, and ingredient are the main elements that determine the nutrition content and whether proteins, glucose, lipids, vitamins, and mineral substances will be applied to the human body. Of these, protein is one of the most important indicators of the living standard of a family, a community, or a nation.

In regards to nutrition, Food and Agriculture Organization (FAO) stipulates

that the average energy necessary is 3,000 calories/person/day for cold areas and 2,500 calories/person/day for hot areas. However, the average energy necessary is only 2,500 calories/person/day in developing countries, which is not enough for working

In Vietnam, before the Renovation period (1986), the average energy necessary is 1,800 calories/person/day. After this period, Vietnam became one of the top rice exporters. Then, the average energy increased to 2,200 calories/person/day. However, the living conditions between urban and rural areas are at different levels, especially the remote areas. Furthermore, the rate of malnutrition among women and children is very high. In the rural and mountainous areas, this rate is highest. According to the Survey Report of

the Institute of Nutrition, nearly 20% of households in rural areas have meal energy under 2,000 calories/person/day. Up to now, Vietnam faces 10-18% obese children; they are concentrated in large cities such as Ho Chi Minh City, Hanoi, and Da Nang, etc.

The meals of the families in study areas are very plain; protein content is very low. These meals are similar to meals of the majority families during the Subsidy Period (in the 1970s and the 1980s). Their meals improved on market days or when they are hosting guests of honor. Generally, there is one market day a week and they buy food on this day for the whole week. They sell or exchange their products such as pigs, chickens, ducks, corn, and bamboo sprouts to buy food. The main foods are salt, fish source, glutamate, and pig's fat, which should not be consumed in excess because of the danger to cardiovascular health. In these markets, the pig's fat is the best selling and its price is equivalent to fat and lean meat.

These families do not pay attention to the improvement of their health through their meals. There are two reasons for this situation. First, they do not have enough money to

cover the qualitative aspect of their meals (enough nutrition and energy). Secondly, they do not have a sense of cooking a nutritious meal with their limited budget. For example, they can replace fish and meat with peanuts, beans, sesame or eggs to improve the nutrition in their meals. Ha Thi Thanh's family in Chien village (Hoa Binh province) is an example of inadequate knowledge on nutrition. Her family is not poor but their two children are malnourished.

3.2.2. *Environmental sanitation and clean water*

Even though the propaganda on environmental sanitation and health care education has been implemented, the result has not reached the desired effect. In Ke Mui village, there is only one septic tank, three two-compartment latrine; 23 households do not have latrines. The rate of households having latrines is 72.3% in Lu village and 85% in Chien village, but all of these are dig latrines. The figures show that the hygiene in these areas is not ensured. They do not use the fresh night soil for cultivation, but use dig latrines or do not have latrines. These are the reasons for the unhygienic situation.

Table 8: Indicators on Environmental sanitation and clean water in study areas compared with the whole country

Indicators	Bac Kan		Hoa Binh		Nghe An		Whole country
	Tan Son commune	Lu village	Nam Son Commune	Chien Village	Giai Xuan Commune	Ke Mui Village	
The rate of having latrine	63.0%	72.3%	80.0%	85.0%	80.0%	63.5%	86.2%
The rate of having hygienic latrine	10.0%	0.0%	67.7%	0.0%	49.0%	7.9%	61.0%
The rate of using clean water	80.0%	72.3%	58.0%	92.0%	59.1%	84.1%	62.0%

Source: Project Survey 2005 and General Statistics Office.

The water source of the Ke Mui people is mainly from deep wells. People who live in the upland fields use the river water or spring water. The households that do not have deep wells use the deep well water of their neighbors. However, this source water is not hygienic. The wastewater runs near the lip of the well. The wastewater absorbs to the surface underground water and goes to the well water. All households in Lu and Chien villages use water from the mountainous areas. This water source leads to the villages by the 135 Program supporting. The water system includes the big tanks with water filters in the mountains, the waster pipes and the tanks in the residential quarters. Basically, the running water is fairly clean. However, according to some villagers in Lu village, the collected water area is near the upland fields. This may be caused by the polluted pesticides and fertilizers.

The Tho people (in Nghe An province) and Dao people (in Bac Kan province) set their stables very near their houses. Muong people (in Hoa Binh province) raise cattle and poultry under the house stilts. The feces of cattle and poultry pollute the air, water, and cause some diseases such as diarrhea, dysentery, parasitic worms, etc.

3.2.3. Customs

Formerly, the villagers cure the diseases by the traditional methods such as using herbs, worshipping, and predicting the diseases. They could not be examined and treated by modern methods. Pregnant women have to abstain a lot. After giving

birth, they are encouraged to only eat rice with salt for a month.

The Tho, Dao, and Muong people in study areas believe that human being have two parts: spirit and body. They believe that when the devils take their spirits, they will get ill. Therefore, the first step in the treatment is that they have to predict what kind of devil is taking their spirit. The soothsayers or sorcerers do this work. After that they will have a divine worship. The offerings depend on the kind of devil, and the situation of the disease. The popular offerings are boiled chicken, stick rice, alcohol, betel, areca, and gosh money. The worship places can be inside or outside their home, even at the crossroads. They never worship on the altar. The main content of the worship is that they propose to the devils the spirit for the patients and they will have a thanksgiving ceremony. At the end of the worship, the sorcerers throw two coins. If one coin lies with the head upward and the other lies with the head downward, it means the devils will agree.

Together with worship, the patients use traditional medicine. The medicine is prepared by the healers or the sorcerers. If the patients die after applying these methods, they suppose that the devils were not satisfied and took the patients' spirit away.

Nowadays, the custom of treatment of diseases by worship has decreased but still exists, especially among the Dao and Muong people. This change occurred when the commune health center was built. From 2000 to now, the commune health center has been repaired and extended with essential

facilities. Moreover, the Government has the priority policies for the ethnic minority groups and remote areas such as health insurance for poor people, and health insurance for the inhabitants living in the commune of 135 Program. Therefore, the inhabitants in these areas can have their diseases treated free of charge.

3.2.4. Social behavior and life style

Up to the study time, there are no cases of drug use and HIV infection in Giai Xuan, Tan Son, and Nam Son communes. However, the behaviors affecting health such as drinking alcohol, smoking tobacco or pipes are popular.

In these communes, drinking alcohol in the Tet holiday, in the festival days or in any occasions are common. Many people have been addicted to alcohol. In the recent years, there are three Tho people in Ke Mui village who have died of drinking alcohol. To reduce this social evil, the villagers in Chien village

(Nam Son commune, Hoa Binh province) have implemented a regulation: Do not drink alcohol during funerals, do not drink excessively. A person who violates this regulation will be punished 50,000VND. If the violation is more serious, the punishment level will be higher. The villagers execute this regulation consciously. Then, the dinking is not popular as before.

Smoking behavior is also popular in these study areas. Many people do not know the harmful effects of smoking. According to the World Health Organization (WHO 2005), Vietnam is one of countries having the highest smoking rate in the world, 56.1% among men and 1.8% among women. The report of Ministry of Health indicates that there are 30,000-40,000 people who have died of smoking in Vietnam. WHO warn that is there are no prevention methods, 10% Vietnam population will die prematurely of smoking.

4.3. The influence of health to food security

Mr. Tien, 33 years old, is Dao people in Lu village (Bac Kan province). His family's economic condition is fairly rich. However, his wife is sick regularly. He is the main laborer of his family. In 2005, his father suffered a serious disease, and was hospitalized six months in Thai Nguyen hospital. He expended six million VND during the time his father was in the hospital. This amount of money is not included in the hospital fees. He had to borrow money from his relationship and sold his herd of cows, pigs, chicken and provisions to cover his father's treatment.

While the family needs a lot of money for treatment and related expenses, diseases cause the reducing of labors. Disease is one of the main causes of poverty. To reduce the

direct and indirect expenses related to disease treatments, many rely on the social security network (Vietnam Developing report 2000).

Although the hospital fees are in remission, the expenses are still too high for most families, especially those families in the list of 135 Program. They do not have enough money and their property value is not remarkable. They have to borrow money or sell their properties to cope with this situation. Many families do not have money to treat their family members in the big hospitals. Diseases can mean disaster, even for the wealthier families.

When there is a sick person in the family, they have to borrow money from relatives and sell their livestock and provisions for treatment. Their children go to school irregularly or drop out of school altogether. The cost of treatment for people in remote areas does not only include direct expenses but also indirect expenses such as transportation and accommodation fees of care takers. To cope with this situation they have to borrow food from their relatives, borrow money on interest, or be hired laborers.

Conclusion

- Thanks to the Government's prioritization program, health care in the study areas has improved remarkably. The health indicators meet the National standards. However, the Government's priority program has not been applied in Nam Son commune.

Some health-related issues impacting these communes are: running water, environmental sanitation, knowledge and awareness of people on health care issues.

Their daily drinking behaviors also impact their health.

- Using traditional medicine in the study areas is spontaneous; it is not encouraged and managed by the local authorities as well as health systems.

- The local customs have a significant impact on health care, especially in Lu village (Bac Kan province) and Chien village (Hoa Binh province).

- The relationship between food security and health care are clearly presented in the study areas. The rate of poverty and food shortage in the study areas is very high. Few households have reserved capital. If there is a sick person in their families, their lives will be impacted severely.

Recommendation

- To maintain and promote the effect of the policies for the ethnic minority groups, especially the priority policies on health care. Particularly, the priority policies should be applied immediately in Chien village so that people can benefit from these policies.

- To inform and educate regularly on health care. The main issues are: using and managing clean water, environmental sanitation, preventing malnutrition for children, taking care of mother's health, processing nutritional food for children and adults, etc.

- Maintain and improve water sources, especially in Chien village (Hoa Binh province) and Lu village (Bac Kan province)

- To avoid the harmful elements related to health such as raising livestock under the house on stilts and setting the stable near the house. To inform the people building and using the hygienic latrine such as the septic tank and semi-septic tank. To dispose the waste, especially the feces of cattle and poultry on the roads.

- To maintain and improve the effects and quality of health care services in local areas by training and retraining health staff to update their professional knowledge.

- To minimize the custom of drinking alcohol among the villagers by enforcing regulations on drunkenness like that in Chien village (Hoa Binh province).

- The local authorities and health staff need to have the appropriate methods to apply traditional medicine and manage the healers. The valuable traditional medicine needs to be reserved and disseminated.

- To gradually eliminate customs impacting health care such as worshipping for treatment, and following a strict regiment during pregnancy.

- Food security and health care have a close relationship. Improving the health care system and ensuring food security needs to be implemented together. Therefore, the comprehensive coordination between the health system, agriculture, and forestry is necessary, especially as the interest and partnership of the local authorities is indispensable.

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