MORBIDITY PATTERNS OF UPLAND FARMERS: A COMPARATIVE STUDY BETWEEN THE LAKE BALINSASAYAO AND THE ATA POPULATION GROUPS

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Introduction

One of the services that upland population groups badly need is health. Since all the health services provided by both government and private sectors are located in the lowland centers, the upland population groups are alienated from these services both by physical distance and cost.

One of the concerns of the Silliman University Research Action Development Program in the Uplands (SURADPU) is the improvement of health condition of upland farmers. These upland farmers include the Ata farmers in Cangguhub, Mabinay and the farmers around Lake Balinsasayao in Enrique Villanueva, Sibulan. Cangguhub and Lake Balinsasayao are 87 km and 25 km northwest of Dumaguete City, respectively.

The improvement of health condition of upland farmers was expected to be achieved by two processes. First—is the introduction of appropriate farming system in the uplands which included soil conservation and cropping systems development (to improve the productivity level of the farms as well as the quality of the agricultural products; such improvement would bring better diet and nutritional conditions to the farmers as well as better health conditions). Second — is the coordinating function of SURADPU personnel in tapping the services of the Department of Health (general health check-ups and medicines were provided to the farmers to prevent high occurrence of illness in the uplands).

This study, therefore, is an attempt to document the pattern of incidence of illness between two population groups who are beneficiaries of SURADPU. These beneficiaries are the Ata and the farmers of Lake Balinsasayao.

RESEARCH ISSUES AND PROBLEMS

Development programs in the uplands tend to employ an integrated approach, Such approach is generally multi-disciplinary since upland problems are perceived to be multi-faceted. The ultimate goal of the program is to improve the over-all welfare of the population

Welfare is a complete concept that carries multi-dimensional implications. It is largely a quality of life expressing certain amount of freedom from want and hunger. Health condition of the population, considering the variety of factors affecting it, provides a summative index of welfare. It represents the result of interaction of factors such as working condition, food availability in household, access to health services, farm productivity level, labor use and condition of farms.

Health condition, therefore, can serve as a single index of welfare. It can be used as a measure of effectivity of upland development program.

Health condition, as an abstraction, can be empirically measured by a number of indicators. One of these is the incidence of illness or getting sick during a given particular time point. The local population can be asked to report the number of times they have been ill during a particular time frame. For instance, the time frame could be during the past month, past two months, past six months, or past 12 months whichever is most convenient. However, for reliability purposes, the shorter the time frame, the better for the respondent to recall easily.

For long term study, such measure is easily collected on a regular shorter time frame. For a period of one year, the information may be collected on a weekly or monthly basis.

The measure of incidence of illness, as an indicator of health condition, can also provide other relevant information aside from just information on incidence, *per se*. It can generate information on the diseases that commonly hit the population as well as on the number of days that an individual stays home to rest because he is sick.

The information on the kind of illness will allow program management to identify weak areas of the program. It will enable the program to determine what preventive and curative measures have to be strengthened and made available to the local population.

The number of days the farmers are unable to work because of illness is a very important information in determining labor use and labor availability in the household. Since farming systems development require intensive human labor, information on household labor supply is essential for developing strategies in farming systems improvement efforts. The health factor on household labor availability will provide depth in the understanding of labor supply in the community.

METHODOLOGY

During the month of July 1988, the incidence of illness among the two population groups was monitored. The referent time was the last 30 days immediately prior to the contact.

At the same time of the contact, each household member was asked to report whether they were ill during the last 30 days. Information on symptoms of illness were noted together with the length or number of days of temporary incapacitation among working age household members. Symptoms of illness were later categorized into kind of illness.

Various age groups of morbid individuals were noted and were cross-categorized by kind of illness and by the numbr of days of temporary incapacitation. This cross categorization was very important since incidences have varying length of occurrences. Counting only the incidence per se will miss a lot of contextualizing information since one who got ill for one day compared to one who got ill for 10 days are completely different especially in the light of providing labor toward farming systems development.

DATA AND DISCUSSION

Among the Ata farmers, 93 were surveyed. Forty-seven per cent are males and the rest females. Combining male and female population, 41% are below 10 years old (18% for male and 23%

Table 1

Age Distribution of Surveyed Population on Morbidity

Individual Categories	Ata Farmers (%)	Lake Balinsasayao Farmers (%)
Male		
Below 10 years old	17 (16.8)	25 (22.7)
10-19	11 (10.9)	10 (9.1)
20-29	5 (5.0)	5 (4.5)
30-39	6 (5.8)	5 (4.5)
40-49	3 (3.0)	4 (3.7)
50-59	2 (2.0)	2 (1.8)
60+	0 (0.0)	3 (2.7)
Female		
Below 10 years old	21 (20.8)	22 (20.0)
10-19	8 (7.9)	11 (10.9)
20-29	11 (10.9)	7 (6.4)
30-39	11 (10.9)	7 (6.4)
40-49	4 (4.0)	6 (5.5)
50-59	0 (0.0)	0 (0.0)
60+	2 (2.0)	3 (2.7)
TOTAL	101 (100.0)	110 (100.0)

for females). Those who are 40 years old and older constitute 12% both men and women added together. The rest are from 10 to 39 years old (see Table 1).

For the Lake Balinsasayao farmers, on the other hand, 110 individuals were studied. Of these individuals, 49% are males and the rest females. Compared to the Ata subjects, the Lake Balinsasayao farmers have slightly higher proportion (43%) of indivi duals belonging to age below 10, combining male and female population. Those who are in their 40s and older constitute 16% which is higher than that of their Ata counterpart. The rest belong to 10-29 years old bracket.

Of the 44 male population among the Ata, 16% were reported ill during the last 30 days prior to the contact in contrast to 37% of its 49 female counterpart (see Table 2). This suggests that the female population is more prone to illness than the male Ata population.

By age level, 18% of the male Ata below 10 years old claimed ill during the last 30 days before contact compared to 33% among the female Ata with similar age level. Among the 10 to 19 years old group, the females consistently demonstrated higher rate than the males. Nobody among the 10-19 years old male was reported ill, while around 25% did get sick during the time referent period among the female Ata. The same is true for age bracket 20-29. Only 25% were reported for the males in contrast to 67% among the females. For the age group between 30-49 again the females have a higher rate compared to that of the males; 33% females and 20% males were reported sick. The females among the 50 and the older age group still yielded higher percentage compared to that of the males; 33% for women; 22% for men. In all age groups, the females show higher morbidity rates compared to that of the males.

While it is true that the female Ata are more prone to illness than their male counterpart, the men, however, tend to stay ill longer than that of the females. The men, once they get sick, stay ill for around 14 days on the average, in contrast to only nine days for that of the females. During this period of illness, the Ata es-

Table 2

Incidence of Morbidity Among the Ata

Individual Categories	Ill During The Last 30 Days	Not Ill During The Last 30 Days	Average Number of Days Ill During the Last 30 Days
Male			
Below 10 years old	3	14	10.33
10-19	0	11	—
20-29	2	3	13.00
30-39	1	5	7.00
40-49	1	2	24.00
50-59	0	2	—
60+	0	0	—
Female			
Below 10 years old	7	14	5.57
10-19	2	6	4.00
20-29	3	8	5.50
30-39	3	8	15.33
40-49	2	2	9.00
50-59	0	0	—
60+	2	0	17.00

...ally the males are tempering "incapacitated" from their farm ...rk. If we assume that the illness period on a monthly basis is ...ays, then an ill male Ata can be thrown out of work by around ... of the year at most. This may happen to 18% of the male ...ulation.

...On the whole, the incidence of morbidity among the Ata is ... If we take the average time under which an Ata individual ...ck, for males and females, it will take 12 days. This would ...n that those 26% of the total Ata population who will get sick ...e year are generally thrown out of job by more than 100 ...

...On the other hand, for the 54 male individuals surveyed ...ng the Lake Balinsasayao farmers, 19% were reported ill ...ng the last 30 days before contact. Among the 56 females sur-...l, 11% were found sick during the study. A higher morbidity ...was registered by the male individuals among the Lake Balin-...ao farmers. This is exactly opposite to what we found among ...ta farmers where higher morbidity rate has been recorded ...e females.

...By age groups, males below 10 years old showed the highest ...ntage of sick individuals; 28% of this group were reported ...uring 30 days before contact. For the females belonging to ...me age category, only 14% were reported sick during the ...period. Again, the males consistently show higher morbidity ...nce compared to that of the females. From age 40 and above ...r the males, 33% of the population in this age group were ...d ill during the 30-day period prior to contact. Among the ...s, nobody was reported ill during the period (see Table 3).

...ring the 30-day period of monitoring, on the average, a ...le individual usually stays ill for around 10 days. For the ...s, it is only around three days. This means that while the ...alinsasayao females have lower morbidity rate compared ...r counterparts, the females also showed shorter period of ...ng 'incapacitation" caused by illness compared to that of ...es.

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Combining the male and the female population together, the incidence of morbidity among the Lake Balinsasayao farmers is around 17%. If we assume the average number of days a person is ill during 30 days prior to contact as a running monthly average for a period of 12 months, an individual in Lake Balinsasayao will be tempering "incapacitated" firm work by around 75 days. This will happen to approximately 70% of the total population of Lake Balinsasayao.

If we compare the incidence of illness between the Ata and the Lake Balinsasayao farmers, the Ata has higher incidence — 53% higher compared to that of the Lake Balinsasayao farmers. This higher incidence of illness among the Ata is partly explained by the lower food supply in the Ata household compared to those from Lake Balinsasayao. For instance, in two case studies of household productivity during one annual cropping in Lake Balinsasayao, a household can produce, on the average, 2.276 kilograms of various farm products. Among the Ata, it is only slightly over 1,000 kilograms. The Lake Balinsasayao farmer doubles the production of an Ata. Hence, more food is available to an individual coming from Lake Balinsasayao. Better nutrient can be expected from the Lake Balinsasayao population improving the over all health condition of its people.

Another factor that may help explain the higher incidence of illness among the Ata compared to that of the Lake Balinsasayao farmers is the absence of regular health team visitation among the farmer. In Lake Balinsasayao, through the health unit from the municipality of Sibulan, a monthly medical consultation has been provided. This service provided both curative and preventive measures against diseases. Hence, the low incidence of illness and the short average number of days sick among the Lake Balinsasayao populace are also partly explained by the availability of curative and preventive medical services.

The disease prevalent among the Ata and the Lake Balinsasayao farmers are similar in both groups. Upper respiratory diseases like coughs and colds are common in both population groups. Around 50% to 60% of the male and female population

Table 3

Incidence of Morbidity Among the Lake Balinsasayao Farmers

Individual Categories	Ill During The Last 30 Days	Not Ill During The Last 30 Days	Average Number of Days Ill During the Last 30 Days
Male			
Below 10 years old	7	18	4.43
10-19	0	10	—
20-29	0	5	—
30-39	0	5	—
40-49	1	3	30.00
50-59	1	1	1.00
60+	1	2	5.00
Female			
Below 10 years old	3	19	3.00
10-19	0	11	—
20-29	0	7	—
30-39	3	4	2.67
40-49	0	6	—
50-59	0	0	—
60+	0	3	—
TOTAL=110			

Table 4

Illness of Individuals During the Last 30 Days Before Contact
Compared Between The Ata and the Lake Balinsasayao Farmers

	Ata		Lake Balinsasayao Farmers	
Illness	Male (%)	Female (%)	Male	Female
Colds only	—	6.0	30.0	33.0
Cough only	—	—	20.0	—
Colds and fever	—	—	—	—
Cough and fever	—	11.0	—	—
Cough and colds	58.0	33.0	10.0	17.0
Cough and colds and fever	14.0	—	—	—
Fever only	14.0	22.0	10.0	33.0
Hip and knee bone pain	14.0	11.0	20.0	—
Muscular pain	—	—	—	17.0
Dysentery	—	17.0	—	—
Back pain	—	—	—	—
TB (early stage)	—	—	10.0	—
	100.0	100.0	100.0	100.0
	(7)	(19)	(10)	(6)

from various age groups were reported sick. They suffer from coughs and colds during the last 30 days prior to contact (see Table 4).

Other illness like hip and knee bone pain were reported from both groups. Only in Lake Balinsasayao where we observed a confirmed TB case in its early stage. The confirmation was made by the TB Pavillion of Negros Oriental. No such case has been reported among the Ata.

Intestinal ailment like dysentery was reported only among the Ata. No case has been reported among the Lake Balinsasayao farmers.

Table 5 summarizes the salient difference on morbidity issues between the Ata and the Lake Balinsasayao farmers.

It should be noted that both the Ata and the Lake Balinsasayao farmers have been subjected to intervention program on farming systems development. Projects on soil rehabilitation and cropping systems development have been introduced which must have already provided its initial benefits to the farmers. In another study on the effects of SURADPU on the health condition of the Lake Balinsasayao farmers showed that, on the whole, the health condition has improved. Various indicators such as incidence of illness, arms circumference of children, height and weight revealed a better condition two years after the implementation of the project compared to the time before SURADPU was implemented. Proportion on the incidence of illness at present (1988) is also lower than what we found in the study conducted two years after (1986) the implementation of SURADPU. This therefore suggests that the Lake Balinsasayao farmers are progressively increasing the health benefits they derived from the project.

For the Ata, however, in the absence of health studies before, the effects of SURADPU can still hardly be discerned. The slight increase in their production of 20% at present from that level before the project started may not have yet an impact on their health, since their actual production at present is still very low. The slight increase at present is still not enough to meet their minimum food requirement. The present morbidity pattern of the Ata is still quite similar to the health condition of the pre-project implementation period.

Table 5

Comparison of Morbidity and Length of Incapacitation Caused by Illness Between the Ata and the Lake Balinsasayao Farmers

Individual Categories	Lake Balinsasayao Farmers		Ata Farmers	
	Percentage of Population III During the Last 30 Days	Average Number of Days III During the Last 30 Days	Percentage of Population III During the Last 30 Days	Average Number of Days III During the Last 30 Days
Male				
Below 10 years old	28%	4.43	18%	10.33
10-19	0	—	—	—
20-29	0	—	40%	13.00
30-39	0	—	17%	7.00
40-49	25%	30.00	33%	24.00
50-59	50%	1.00	0	—
60+	33%	5.00	0.	—
Female				
Below 10 years old	14%	3.00	33%	5.57
10-19	0	—	25%	4.00
20-29	0	—	67%	5.50
	43%	2.67	27%	15.33
	—		50%	9.00
	—		0	—
	—		100%	17.00

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SUMMARY AND RECOMMENDATIONS

The health condition of the farmers can stand as a major indicator of welfare which the clientele population derived from a project. Comparing the Ata and the Lake Balinsasayao farmers' health condition, the Lake Balinsasayao farmers have a better welfare compared to that of the Ata. The incidence of illness among the Ata is higher by 53% compared to that of the Lake Balinsasayao farmers.

On the basis of the average number of days a person usually gets sick, the Lake Balinsasayao farmers consistently revealed a more favorable one compared to that of the Ata. Those who got sick among the Ata during a 12-month period would be ill of around 140 days. Among the Lake Balinsasayao farmers, the average number of days would be 78%. The Ata farmers' incidence of illness is higher by around 80% compared to that of the Lake Balinsasayao group.

This suggests that the Lake Balinsasayao farmers have better control on the supply of labor on their farms since illness no longer draw many workers out of job. Among the Ata, this is not yet so. Illness still takes substantial number of days when workers are incapacitated. The natives will surely have difficulty in the control of labor supply for farming systems development.

For practical consideration, it is apparent that the provision of health services in the upland will help improve the welfare of the population. While it is true that the major concern of upland development is the improvement of the local farming systems, such major concern should be supplemented with medical services to bring higher welfare to the local upland population. Furthermore, the provision of a regular medical services will provide the farmers with better control on their household labor supply.

On the basis of the prevalent illness among the Ata and the Lake Balinsasayao farmers, it is recommended that health services should concentrate on intestinal and upper respiratory diseases including tuberculosis. Their regular availability of medicine for these types of illness will help improve the overall morbidity pattern of the upland population.