

How Effective is the PHC Strategy?: Highlights of the Results of a Survey

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Three general findings are indicated by the study. These are: (1) PHC is an effective strategy in improving the health practices of the decision-makers and in improving the knowledge on health matters by the dependents in the households surveyed; (2) Level of citizen participation is a critical factor which influences health practices of the decision-makers and general awareness on health among the dependents; and (3) The Barangay Health Workers' (BHWs') performance is an important aspect in forging better health practices and in turn, the BHWs' performance is influenced by their participation for this role. In spite of its relative effectiveness, some constraints are still discernible, the most notable of which is the lack of adequate support systems for the BHWs and the poor economic standing of the people in the communities studied.

Introduction

Background of PHC

Primary Health Care (PHC) is one of the innovative strategies introduced under the Marcos Regime that is still being carried out under the Aquino Administration. PHC merits attention as it recognizes the importance of both participatory and integrated strategies in planning and implementing health care activities. It is participatory as citizens are encouraged to define and implement activities that could respond to their health needs. It is integrated because the policy framework of PHC expressly states that health activities should be integrated into the socio-economic development of the community.

An added feature of the PHC strategy is the cognizance of carrying out these services at a cost that is "sustainable" and "affordable" by the people. Hence, one of the significant marks of this approach is the recognition of the need to tap indigenous resources in order to fulfill the needs and demands of the community. One of these resources that is now being recognized and given an appropriate place in health service delivery is herbal medication.

The legal basis for the adoption of PHC in the Philippines is the issuance of Letter of Instruction No. 949 on October 19, 1979. This directive mandated the then Ministry of Health to design, develop and implement programs which focus on health development at the community level, particularly in rural areas.¹ Hence, the PHC approach was piloted in selected provinces in all regions around the country in 1980. Thereafter, PHC was launched nationwide on September 11, 1981.

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The Primary Health Care Committees

In order to cope with the requirements of the PHC strategy, the organizational structure of the Department of Health was streamlined. At the lowest political subdivision of the barangay, a Barangay Primary Health Care Committee (BPHCC) was mandated to be constituted in order to identify the health needs of the community, mobilize local resources, manage and monitor health and health-related action programs.

At the higher levels of the political-administrative framework of government such as the municipality, province, region and the national government, corresponding PHC Committees were also directed to be constituted with the function of overseeing, monitoring and providing the policy framework for PHC planning and implementation. These different committees serve as the "principal venues for close and binding inter-agency relationships" as they are to be composed of representatives from government and the private sector.²

The constituency of the different PHC committees higher than the barangay level are the existing health and nutrition sub-committees under their respective development councils.³ The development councils are the existing planning bodies at the sub-national levels composed of elective officials of local governments and representatives from the different sectoral agencies implementing their respective programs and projects. The health and nutrition sub-committee in turn, is often headed by a local executive of the Department of Health.

At the barangay level, the local PHC committee is to be established by the local legislative body (or the barangay council) since a barangay does not have its counterpart development council. Membership is to be drawn from existing governmental and non-governmental organizations.

The Barangay Health Workers

Another feature of the PHC strategy is the identification of voluntary health workers called Barangay Health Workers (BHWs). They are expected to be identified through a participatory process and are to implement activities that are defined by the people. They are to cover an ideal number of 20 households each.

However, as far as the DOH is concerned, the BHWs supplement or complement the health promotion and disease preventive activities of the health care delivery system of the Department. In fact, a *Training Module on the Five Impact Programs for the Training of Barangay Health Workers* was prepared by then MOH and this is still being followed by the current administration. The module aims to guide the content of training of the Department of Health trainers and to cover some basic knowledge instruction on how to promote health and how to prevent and control diseases under the five impact programs. The five impact programs are maternal and child health; and, the prevention and control of four diseases such as diarrhea, tuberculosis, malaria and schistosomiasis.

The BHWs now form part of the network of the health care delivery system of the DOH at the barangay level. The BHWs serve as a link between the community and the Barangay Health Station (BHS), a satellite station under the Rural Health Unit (RHU).

The Research Problem and the Methodology

The Research Problem

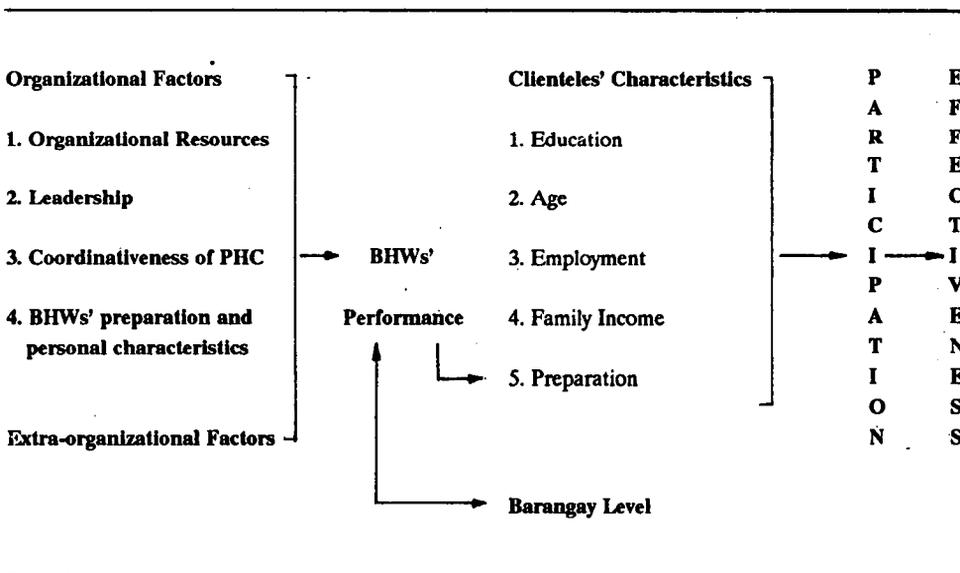
This paper focuses on the major findings of the survey conducted by this author⁴ for the Training and Development Issues Project of the National Economic and Development Authority. The research primarily assesses the effectiveness of the PHC strategy and the factors affecting its effectiveness.

The study is guided by a conceptual framework summarized in Figure I.

The study posits that PHC is an effective strategy because of the role of the citizens in making decisions regarding the activities that have to be primarily tackled to respond to their health needs. This is argued to be more effective than the traditional "top-down" approach because the citizens are more knowledgeable about the problems that directly affect them. Hence, the activities pursued are more relevant and responsive to their needs.

The effectiveness of PHC, however, hinges on a number of factors. First of all, the citizens constitute an important segment in the full realization of PHC. Their involvement in the planning and implementation of the different activities for PHC is the very essence of the PHC strategy. Level of effectiveness, therefore, depends upon the level of people participation in the different activities of the community.

Figure 1. Conceptual Framework



Level of involvement of the citizens, in turn, may be facilitated or constrained by some of their socio-demographic characteristics such as age, educational attainment, family income and employment status.

A more important factor, however, is the preparedness of the target beneficiaries for PHC. Their knowledge of and attitude towards PHC will affect their level of participation in community activities. Those who are more knowledgeable about the policies and goals of PHC and have a more favorable attitude towards the approach participate more in the activities of the community.

Preparedness of the residents for participation is influenced by the performance of the BHWs in initiating PHC in a given area. How well BHWs link up with the community in order to inform them about the purposes of PHC affects the knowledge level and the attitude of the citizens regarding this strategy.

The effectiveness of the BHWs, in turn, is dependent on a number of factors, both organizational and extra-organizational. Organizational factors refer to those components within the structure of the PHC network such as those concerning the PHC Committees and the DOH, the latter being the lead agency that oversees the implementation of this strategy. The components within these structures that can directly affect the performance of the BHWs are the adequacy of the resources extended to the BHWs and the management capability of the leadership in overseeing the execution of PHC in a given area.

The extra-organizational components of PHC include such factors outside of the organizational structure of PHC which may also affect the implementation process. These may include peace and order problems and other contextual variables that may impede or facilitate the immediate implementation of community activities.

Indicators of Effectiveness

The research determined effectiveness by comparing the health practices of the decision-makers on health who had some exposure to PHC vis-a-vis those without.

Second, this also compared the morbidity rates in the households whose decision-makers are familiar with PHC as against those who are not aware of this strategy.

Third, this also considered the awareness of selected health practices among household dependents who are 15 years old or older. The group familiar with PHC vis-a-vis the unfamiliar ones were compared to determine the effect of PHC. The dependents were considered in this research since they constitute a potential resource in terms of implementing health activities.

Fourth, secondary data were also analyzed to find out if there are differences in the morbidity and mortality rates before PHC was introduced in the 12 barangays covered in this research and in the year 1986.

Study Sites

The areas covered in the study are from Regions III, VI and XII and represent Luzon, Visayas and Mindanao, respectively. The primary areas from where the respon-

dents were drawn are four barangays in each region. Each of the four barangays represents one of the four levels of PHC implementation. The DOH criteria for assigning barangays to a level are summarized as follows:

Level I (Social Preparation/Awareness Level)-- where leaders and the citizens are aware of the basic strategy of intersectoral partnership; community leaders have been trained for PHC.

Level II (Leadership Organizational Design--LOD)-- where appropriate organizational structures for planning, implementation and evaluation had been identified; and, goal statements are articulated relative to the needs of the community.

Level III (Program Planning and Management)-- where community-based projects become operational including mobilization of local resources, both human and material.

Level IV (Institutionalization of PHC)-- where barangay councils serve as the broad-based political support of PHC in policy-making; and, program formulation and management of PHC by community-level leadership are established and operational.

Another criterion for the selection of the study sites is that no other program encouraging a participatory strategy is being implemented other than the one's initiated by the DOH. Also, barangays beset by peace and order problems were ruled out.

The barangays chosen from Region III are from the municipalities of Zaragoza and San Antonio in Nueva Ecija. In the case of Region VI, three barangays were drawn from the municipalities of New Lucena and Zarraga of Iloilo. A fourth barangay was picked out from the municipality of Jordan, in the sub-province of Guimaras.

All the four barangays representing Region XII were from the municipality of Marantao of Lanao del Sur.

The Respondents

Decision-makers and Dependents. The primary respondents of the study are 732 randomly selected decision-makers from the 12 barangays covered in this research. They were asked about their practices on health and their involvement in community activities that were introduced by the BHWs and other organizations.

A total of 651 dependents were also interviewed in order to gather information on the involvement of the dependents in decision-making in the family and their knowledge of selected health practices. They were also asked about their involvement in health activities and related projects.

The decision-makers and dependents were drawn from sample households. The respondents per household, composed of one decision-maker on health and a dependent who is 15 years old or older, were drawn by applying a systematic sampling strategy

of the houses in the area, based on a sampling error of 0.1. Thus, a spot map for each barangay was secured first to be able to rationally draw the sample households per area. The sample size for the households was determined by applying the following formula:

$$n = \frac{NZ^2 \cdot p(1-p)}{Nd^2 + Z^2 \cdot p(1-p)}$$

where:

Z = the value of the normal variable (1.96) for a reliability level of 0.95

p = the largest possible proportion of 0.5.

d = sampling error of 0.1.

N = population size

n = sample size

The BPHCC Constituents and the BHWs. In order to appreciate the activities performed by the BPHCC and the BHWs in the barangays chosen for the study, all the chairmen of the barangays with existing BPHCCs numbering ten in all were interviewed. Thirty nine members who actively participated in fifty per cent or more of the BPHCC meetings were also interviewed.

All or at most five BHWs assigned in the barangays chosen for the study were targeted. A total of 44 BHWs were interviewed for this research.

Techniques of Data Collection

The primary technique adopted in the study was person-to-person interview of the target respondents.

The research also relied on documents and records pertinent to the barangays chosen for the study.

The data collection was carried out between April 15 and July 15 in 1987.

Major Findings

The Effectiveness of PHC

Indicator I: Health Practices of Decision-Makers. This study shows that PHC is an effective strategy in terms of improving the health practices of decision-makers with some exposure to PHC.

The health practices of the decision-makers were analyzed based on four component items. The first one concerns the items on general health. The questions included here deal with the regular source of drinking water of the household, type of toilet utilized, manner of disposing of garbage, availability of food-bearing plants, availability of medicinal plants and other practices adopted in maintaining the cleanliness in the surrounding area of their respective households.

The second component concerns the nutritional practices of the family such as the number of meals eaten daily and the kinds of food taken in (whether a meal combines cereals, proteins, fruits and vegetables).

The third component focuses on the actual or potential health practices for children. The items included here concern the type of milk given or preferred to be given to the babies in the household and the immunization practices for children who are three and below. It was considered important to include potential practices for those who do not have babies yet since the decision-makers' preferences are likely to influence actual practices.

The fourth component has to do with actual or potential family planning practices. This component includes such items as the actual family planning method preferred, utilized in the past or currently being used by the decision-makers.

Table 1 compares the profile of the general health practices of decision-makers familiar with the PHC strategy vis-a-vis those who are not. Decision-makers who are familiar with PHC depend more on reliable sources of water supply (i.e., piped water system, artesian well or water pump vis-a-vis rain water, spring water or open well), own their toilets, dispose their garbage by burning rather than dumping, cage their animals rather than let them roam around, and grow more food bearing plants and herbal medicines. They generally maintain clean and sanitary environment as evidenced by the absence of animal waste and garbage in the yard and the absence of stagnant water.

Table 1. General Health Practices of Those Who are Familiar with PHC vis-a-vis Those Who Are Not (in percentage)¹

<i>Factors</i>	<i>Ever Heard of PHC?²</i>	
	<i>YES</i>	<i>NO</i>
1. Source of drinking water		
a. Piped/artesian well/pump	87.6	77.1
b. Rain water/spring/open well	12.4	18.6
c. No regular source	0	4.3
2. Ownership of toilet		
a. Yes	95.5	83.2
b. No	4.5	16.8
3. Type of toilet used generally		
a. Flushed	48.0	42.1
b. Antipolo	5.6	4.9
c. Open pit	41.8	35.9
d. None	4.5	17.1

Continuation of Table 1

4. Manner of garbage disposal		
a. Burned	93.8	76.2
b. Dumped in specified place	6.3	19.5
c. No answer	0	4.3
5. How animals are kept, if there is any		
a. Fenced/caged	47.8	32.5
b. Tied	16.6	19.9
c. Free to roam in yard	30.1	40.1
d. Free to roam in house & yard	5.5	7.5
Total number of samples (n)	(163)	(376)
6. Is the house fenced in?		
a. Yes	35	21.5
b. No	65	78.5
	n = (177)	(531)
7. Availability of food-bearing plants		
a. Yes	81.9	74.0
b. No	18.1	26.0
	n = (177)	(531)
8. Availability of medicinal plants		
a. Yes	72.3	47.6
b. No	27.7	52.4
	n = (177)	(531)
9. Presence of animal waste/garbage in the yard		
a. Clean/sanitary	26.6	25.0
b. Little	49.7	47.0
c. Some	21.5	21.8
d. Much	2.3	6.2
	n = (177)	(531)
10. Presence of stagnant water		
a. No	91.0	76.6
b. Yes	9.0	23.4

¹The total per column of each factor is 100% and is no longer reflected.

²If the total number of samples is not indicated per factor, this means that the total number of respondents among those who heard of PHC is 177 and those who have not heard, 555.

Table 2 shows a comparison of the nutritional practices of the households of decision-makers who have heard of PHC and those who have not. The data show that decision-makers whose families had some exposure to PHC prepare a more balanced diet for their households.

**Table 2. Nutritional Practices of Households,
Comparing Those Who Ever Heard vis-a-vis
Those Who Have Not Heard of PHC (in Percentage)¹**

<i>Nutritional Practices</i>	<i>Ever Heard of PHC²</i>	
	<i>Yes</i>	<i>No</i>
1. Number of meals eaten daily		
Two	0	6
Three	100	94
2. Food generally eaten for breakfast		
Cereal + protein + fruit	15.3	15.7
Cereal + protein or fruit	81.4	73.1
One kind	3.4	11.2
n =	177	528
3. Food generally eaten for lunch & supper		
Cereal + protein + vegetable + fruit	19.2	16.2
Cereal + protein + vegetable or fruit	45.2	55.0
Cereal + vegetable or protein or fruit	35.6	28.6
One kind	0	.2
n =	177	531

¹The total per column of each factor is 100% and is no longer reflected.

²If the total number of samples is not indicated per factor, this means that the total number of respondents among those who heard of PHC is 177 and those who have not heard, 555.

Some basic health practices for children were also considered as an additional component of overall health practices. Table 3 shows that immunization of children as an actual or potential practice is higher among decision-makers with exposure to PHC (88.1% in all) as against those without (78.2 % only).

However, it is noticeable that the preferences of decision-makers with exposure to PHC are for other types of milk rather than for breastmilk.

Table 3. Health Practices for Children, in Percentage¹

<i>Practices for Children</i>	<i>Ever Heard of PHC²</i>	
	<i>Yes</i>	<i>No</i>
1. Type of milk given or preferred to be given to babies		
Breastmilk	57.5	61.4
Other type	42.5	38.6
	n = 174	523
2. Type of milk that is considered best for babies		
Breastmilk	61.5	63.2
Other type	38.5	36.8
	n = 174	529
3. Immunized or prefer to immunize children		
Yes	88.1	78.2
No	11.9	21.8

¹The total per column of each factor is 100 % and is no longer reflected here.

²If the total number of samples is not indicated per factor, this means that the total number of respondents among those who heard of PHC is 177 and those who have not heard, 555.

In terms of family planning practices, Table 4 shows that a difference exists between decision-makers who are familiar with PHC as against those who are not. The first group has a bigger percentage (48 %) saying that they are currently practicing, have practiced or will likely practice family planning. On the other hand, the second only has 32.1 % giving an affirmative answer to this question.

Another distinction is the higher percentage of decision-makers familiar with PHC who utilize or adopt the most effective methods for family planning such as vasectomy or ligation.

Table 4. Family Planning Practices, in Percentage

Practices	Ever Heard of PHC?	
	Yes	No
1. Current, potential or past practitioners		
Yes	48.0	32.1
No	52.0	67.9
Total	100.0	100.0
2. Method utilized/utilizing/will utilize		
Ligation/Vasectomy	19.1	15.7
Pills/IUD	42.9	46.6
Rhythm/Condom/Withdrawal/Abstinence	38.1	37.7
Total	100.0	100.0
n =	(84)	(178)

Each of the aforementioned items was given a score (see Appendix A) in order to determine the general profile of the group exposed to PHC. The mean level of health practices among those familiar with PHC is 26.2 as against 25 points among those who are not. The difference between these two groups is statistically significant with a one-way analysis of variance, the F ratio of which is 10.8. This value is statistically significant at the .01 level (d.f. = 1/730).

Indicator 2: Knowledge of Dependents Re: Selected Health Practices. The second indicator on effectiveness also yields a significant finding. Those who had some exposure to PHC manifested a higher knowledge level as against those who were unfamiliar.

The dependents were asked to respond to five items regarding basic health practices, nutrition and family planning. They were as follows:

- (1) Water from an open spring is safe to drink.
- (2) It is all right to throw garbage any place you like.
- (3) A balanced diet is made up of plenty of rice and meat or fish.
- (4) Family planning means deciding on the number of children a married couple would like to have.
- (5) It is all right to throw your feces anywhere you like to.

Following each item are statements to express varying ranges of agreement or disagreement. Most of the items, except the fourth one, were scored as follows:

Strongly agree--1
Agree--2

Not Sure--3
Disagree--4

Strongly Disagree--5

Item number four was scored in the reverse. Hence, the highest possible score one could obtain for the five items is 25.

The mean score of the aware respondents is 17.8 as against the mean of 16.8 among the unaware group. This difference is significant with an F test of ANOVA ($F = 28.35$, $d.f. = 1/648$, alpha of .001).

Indicator 3: Morbidity and Mortality Patterns from Secondary Data. A third indicator on the effectiveness of PHC is based on the morbidity and mortality rates of the barangays covered in this study. The data were derived from the statistical information compiled by the Department of Health. A summary of the information on these two factors is presented in Table 5.

Based on the table, two time dimensions were compared with respect to morbidity and mortality rates per 1000 population. For Regions III and VI barangays, the baseline data considered to stand for the period before PHC started is 1981. In the case of Region XII, the year considered for the evaluation is 1983.

The year prior to the implementation of PHC is compared with the year 1986.

Except for the Level I barangay in Region III, all the others had available data on morbidity and mortality.

Based on the data, some slight improvements in mortality rate were noted for most of the barangays (six out of eleven) considered in this study suggesting the possible effect of PHC on these areas. While increases in morbidity was observed in most areas (in 7 of the 11), this may be attributed to the general awareness of the populace about health maintenance. Awareness may have, thus, encouraged more consultations. Furthermore, record-keeping may have substantially improved thus reflecting increases in the number of persons who fall ill.

Indicator 4. Morbidity Patterns Based on Survey Data. A fourth indicator of effectiveness was based on the morbidity rates derived from the survey of the actual number of persons who fell ill in the sample households for a period of six months. A comparison was then made of the number of persons who fell ill among the households of decision-makers who had exposure to PHC vis-avis those without. The data show that the latter had a slightly higher number of persons who became sick with a rate of 154 to 1000 population.

On the other hand, a lower mean number of persons who had ailments was discerned among the households whose decision-makers are aware of PHC with a rate of 139 to 1000 population.

**Table 5. Morbidity and Mortality Rates per 1000 Population,
By Region and By Barangay Level Comparing the Year when PHC
Started in the Area and in 1986**

	<i>Region III</i>				Mean Rate
	Barangay Level				
	I	II	III	IV	
Morbidity					
1981	no data	193	210	303	235.3
1986		178	212	366	252.0
Difference		15	-2	-63	-16.7
Mortality					
1981	no data	4.05	2.99	1.12	2.72
1986		6.65	3.26	6.82	5.58
Difference		-2.6	-2.27	-5.8	-2.86
Region VI					
Morbidity					
1981	156.73	333.85	111.50	196.13	199.55
1986	343.3	914.83	141.10	255.81	413.76
Difference	-186.57	-580.98	-29.6	-59.68	-214.21
Mortality					
1981	8.78	23.51	1.76	5.52	9.86
1986	5.26	13.73	7.66	5.16	7.95
Difference	3.52	9.78	-5.9	.36	1.91
Region XII					
Morbidity					
1983	50.0	50	49.4	49.6	49.75
1986	49.4	49.9	50.4	48.6	49.57
Difference	0.6	0.1	-1.0	1.0	0.18
Mortality					
1983	5.7	5.1	6.2	5.8	5.7
1986	4.9	5.3	5.2	4.4	5.5
Difference	0.8	-0.2	1.0	1.4	.15

However, based on the Z test of difference of proportions ($Z = .82$), the mean difference is not statistically significant. To wit, PHC has not yet made substantial effects in the reduction of the illnesses among the households who have some familiarity with the PHC strategy.

Other Factors. The failure to bring about substantial improvements in morbidity and mortality rates in the study sites in spite of improvement in health practices need not be attributed to the ineffectiveness of PHC. There are other existing factors hampering the full realization of the effects of PHC on those who had some exposure to this strategy.

For one, the poor economic standing of the communities studied could be a major deterrent in enabling the community residents in procuring the necessary resources to maintain general health. The mean income level of the households studied is ₱1,853.67 per month. This falls short of the amount necessary to maintain a family of six costing ₱3,421.50 per month.⁵ Furthermore, the group exposed to PHC registered a lower family income with an average of ₱1,525.20 per month. On the other hand, the unexposed group had a mean income level of ₱1,953.06 per month.

A second factor is the lack of basic resources that are prerequisites to health maintenance. For example, the dominant problems that surfaced in Regions VI and XII are the lack of a potable source of water supply and medicines for many ailments.

The Factors Related to Effectiveness

Citizen Participation. The study points out that the level of community participation is a critical factor in terms of influencing the effectiveness of PHC. Citizen participation is measured in terms of the number of activities the respondents are engaged in determining and in implementing in the community that were initiated by the BHWs, other health workers and other community organizations. Its effect may be gleaned on the health practices of the decision-makers and the knowledge of health practices among the dependents. Citizen participation positively correlates with each of these factors. Hence, community residents who participate more in community activities manifest better health practices or higher knowledge levels than those who do not participate as much.

Socio-Demographic Characteristics. In addition to level of participation, the citizens' individual characteristics also influence their health perspectives. The critical factor that is a predictor of the health practices of the decision-makers and the knowledge of health among the dependents is their educational attainment. Those with higher educational attainment manifest better health perspectives.

Role of the BHWs. An important finding is the role of the BHWs in improving the health perspectives of decision-makers. Decision-makers who had the benefit of interacting more with their BHWs manifested better health practices.

However, the BHWs' contribution to the improvement of the awareness of health practices of the dependents is not significant since only 12.1% of the respondents were directly contacted by the BHWs as against 36.9% of the decision-makers.

Citizen Participation

Extent of Citizen Participation. While citizen participation is an important component of the PHC strategy, this is yet to be practiced by the majority of the populace. Only a small number (36.7 %) got involved in community activities among the decision-makers. This is even smaller (18.1 %) for the dependents.

Direct involvement in community activities is still in the process of implementation. As of now, very little participation is elicited from the public in determining what activities are to be implemented and even more so, in evaluating the effects of the activities that they engage in.

While an effort has been exerted to determine the problems of the community based on the people's perspectives (e.g., through survey or public meetings), the identification of activities that will respond to these problems has largely been assumed by the DOH personnel or the BHWs. This means that the "top-down" process is still the dominant approach in determining the activities to be undertaken in the community. Citizen participation has not yet been fully realized in many respects. Therefore, PHC remains to be "community-oriented" rather than being "community-managed." This means that the activities undertaken are based on those directed by the DOH network rather than those identified by the citizens themselves.

Factors Related to LOP. The factors related to level of citizen participation (LOP) in activities sponsored by the BHWs, as well as LOP in activities initiated by other health personnel and community groups are: the decision-makers' educational attainment, family income, knowledge and attitude regarding PHC and the BHWs' performance. In general, the patterns of relationships are positive. The exception is income level where an inverse relationship with health practices is obtained. The latter finding is important as it indicates more participation in community activities on the part of those with low income.

The aforementioned relationships are also borne out in the study of the LOP of the dependents. The exception is family income which was not considered as an independent variable among the dependents.

Knowledge and Attitude Re: PHC Policies

Pattern of Knowledge and Attitude. In general, all decision-makers who know about PHC associate it with the delivery of health services and less with considering the importance of integrating these activities into the socio-economic development in the community (2.3 %). Furthermore, few mention the importance of citizen participation (15.3 % only) as an important component of the PHC strategy.

Consequently, the attitude of the respondents regarding the PHC strategy is ambivalent. While they generally accept the fact that citizen participation is important in responding to the health problems of the populace, they also favor the notion that it is all right to depend on government for the health needs of the community.

The ambivalent stand of the respondents can be traced to the same perspective held by the BHWs themselves and the members of the Barangay Primary Health Care Committee.

Factors Related to Knowledge and Attitude. The knowledge level of the decision-makers is influenced by their educational attainment, the BHWs' performance, overall LOP and income level. Furthermore, more females rather than males know about PHC. Those who have employment also have a higher knowledge level than those without. But among those who are employed, the blue collar workers know more about PHC than those with white collar jobs.

In the case of attitude, only educational attainment is considered to be a significant factor. The BHWs' performance is not a contributory factor for obvious reasons. BHWs themselves have to firm up their own perspectives about PHC policies. Furthermore, sex and occupation are not related to attitudinal level.

The aforementioned findings are confirmed in the study of the knowledge of health practices among the dependents. The only exception is income level which was not included as an independent variable.

The BHWs

BHWs' Effectiveness. Findings show that the BHWs have effectively fulfilled their role of reaching out the more depressed segments of the community. This pattern is supported by the fact that an inverse relationship is obtained between the income level of the decision-makers and the performance level of the BHWs. Furthermore, those who said they are familiar with the PHC strategy have a lower income level than those who are unaware of it.

In general, the BHWs have been very effective in terms of forging activities to complement the service delivery system of the Department of Health. They perform various activities such as promoting health, referring ill persons to the health network, monitoring the health status in the community, and mobilizing the people to participate in community activities in the promotion of health. The aspect most often dealt with in the campaign for health is in the area of cleanliness and beautification.

Factors Related to Performance. The performance of the BHWs is influenced by their preparation for this role. Positive relationships are noted between their performance and such indicators for preparation like: length of training and readership of printed materials regarding PHC.

Furthermore, other factors that influence performance are the age and the employment status of the BHWs. An inverse pattern is noted between age and performance thus suggesting that the younger ones are better performers.

The same pattern is noted with employment status. Those who are unemployed perform better than the employed maybe because their time and commitments are undivided.

Those who have longer service as BHW or as a community development worker manifested better performance as BHWs.

Actual performance is also influenced by the administrative support provided by the government network to the BHWs such as the BHW kits and the existence of health outlets where sick persons could be referred.

Motivating the BHWs. Sustaining the enthusiasm of the BHWs remains to be a problem. This is because no monetary incentives are provided since this role is assumed on a voluntary basis. It should be noted that in spite of the fact that the BHWs are aware that this is a voluntary activity, some still hope or expect to obtain some reward for their efforts. As a result, if a job opportunity becomes available, they jump at it right away.

Performance Across Regions. An assessment of the performance of the BHWs across regions shows that the BHWs from the barangays covered in Regions III and VI are closer to each other in performance. At the tailend are the BHWs from Region XII. This is because the Region XII BHWs suffer in comparison to the BHWs from the other two regions in terms of level of preparation for PHC and the resources made available to them.

Hence, the impact of the varying performances of the BHWs by region has been felt in terms of knowledge and attitude of the decision-makers about PHC policies. More importantly, the regions did vary in terms of the scores on health practices.

A positive relationship is also noted between the performance of the BHWs and the barangay level each is affiliated. In turn, differences in the health practices by barangay level have also been observed.

Recruitment. Based on the policy framework regarding the BHWs, recruitment should be based on a participatory process. However, this stipulation is not practiced. Rather, appointments are often made by the DOH personnel such as the midwife or the nurse.

The Support System for PHC

Health Outlets. The health outlets of the DOH and the personnel manning these outlets constitute a vital resource in supporting the effective implementation of the PHC strategy. BHWs refer patients to these outlets particularly if they are not able to handle more substantial problems concerning illnesses. An uneven pattern, however, is still discerned in the distribution of national resources. The peripheral areas, like the barangays in Region XII, are behind the barangays located in Luzon in terms of resources. All barangays in this region do not have their own Barangay Health Station. Only the Rural Health Unit is the nearest government outlet serving these places.

Community Organizations. The existence of various organizations which are concerned with PHC have helped in forging this strategy. Some of the activities in the barangays have been enriched by their participation.

The BPHCC. The Barangay Primary Health Care Committee (BPHCC) is supposedly the pivotal structure at the local level which could oversee the implementation of PHC. However, in some areas, these structures are not fully operative because of the difficulty in harnessing the support of various individuals. In cases like these, the enforcement of PHC becomes entirely dependent on the BHS or RHU staff, particularly the midwife.

Hence, the basic problem of the BPHCC is typical of any coordinative body. This is the problem of consolidating the efforts of numerous individuals who are often more committed with the primary organizations they are affiliated with.

Monitoring and Evaluation. The local DOH personnel in charge of monitoring and evaluation complain about the lack of resources in fulfilling their responsibilities. As a result, the same problem is noted by the BHWs themselves who are also tapped to perform this function for the DOH.

Criteria for Determining the Level of PHC Implementation. There is a variation in terms of the criteria adopted among the DOH personnel in determining barangays in particular levels of PHC implementation. While indicators had been formulated by DOH to guide the field offices, these indicators are not quantifiable enough to facilitate the process of evaluating barangays.

Furthermore, reassessment of the status of the barangays in the higher levels is not being done so that those who lag in performance are pegged to the level assigned to them.

The Dependents in the Household

Role of the Dependents. This research proves that the dependents in the household constitute a potential group to whom the health campaign can be extended. This is because some household dependents also make decisions regarding health matters for the family. Some do take care of the sick and even give treatment to those with ailments.

Furthermore, even if the dependents are not directly involved in decision-making, they can contribute in many ways in undertaking community activities.

Knowledge of Health Practices. The items on health where the dependents had the most difficulty concern what constitutes a good dietary practice. For them, it is enough to have cereals and protein foods.

They also consider it healthful to rely on open spring as a source of water to drink.

On the other hand, they have a fair knowledge of family planning and the proper disposal of garbage or wastes.

Differences in Performance of PHC Across Regions

It has been noted that variations in health practices exist across regions. The barangays located in Region III are the ones which manifested the highest level of health practices. These are followed by Region VI. The last is Region XII. The ranking here

coincides with the ranking of the actual performance of BHWs based on the decision-makers' assessment per region. This ranking also corresponds with the adequacy of the administrative support provided for PHC. Hence, the aforementioned patterns observed bolster the argument that the BHWs' performance and administrative support influence the health practices of the community.

Knowledge of health practices among the dependents also differ significantly by region of their affiliation. The ranking is as follows: Region VI, III and XII. It has been noted, however, that the knowledge level of the respondents for the first two regions are closer than those from Region XII.

Differences in Health Practices by Barangay Level

The data show that there is a direct relationship between the health practices of decision-makers and the barangay level they are affiliated with. This relationship implies that the degree of implementation of PHC determines the health profile of the population. This pattern is obtained because the BHWs generally accomplish more activities in the higher levels of PHC implementation.

However, the aforementioned pattern is not observed among the dependents. The barangay level of affiliation of the dependents is not directly related with their knowledge level. This may be because the BHWs' performance is not the only factor responsible in shaping the knowledge of the dependents.

Major Conclusions

PHC's Effectiveness

Summing up, this research confirms the theoretical model defined at the outset. First of all, this study discloses that PHC is an effective strategy in improving the health practices of the decision-makers and in improving the knowledge on health matters by the dependents.

Furthermore, some significant improvements are noted in the reduction of the morbidity rate in the households of decision-makers who have a favorable attitude towards PHC.

The impact on mortality rate, however, is not yet fully felt by the entire populace of the barangays covered in this study. Only some minor improvements have been discerned. This slow performance need not be attributed to PHC itself but to the prevailing economic difficulties in the entire community and the absence of basic resources necessary for health.

Role of Citizen Participation

This study also bears out the hypothesis that level of citizen participation (LOP) is a critical factor which influences health practices of decision-makers and general awareness on health among the dependents. Furthermore, other characteristics of the decision-makers and dependents influence their awareness of and actual health prac-

ices. These are educational attainment and having an awareness of and a favorable attitude towards PHC.

Role of the BHWs

The BHWs' performance is an important aspect in forging better health practices. In turn, the BHWs' performance is influenced by their preparation for this role.

On the whole, in spite of the failure of the BHWs to encourage wide-scale participation in decision-making, their effectiveness may be discerned from their ability to reach out the target sectors of the community who are economically deprived. The BHWs have indeed responded to the requirements of the program as far as this aspect is concerned.

Some basic constraints still hamper the effectiveness of PHC. These are the lack of adequate support systems for the BHWs and the poor economic standing of the people in the communities studied.

Figure 2 summarizes the factors related to the effectiveness of PHC. Effectiveness is herein indicated by the health practices of decision-makers and the morbidity rate in their respective households.

Figure 3 summarizes the factors related to the dependents' knowledge of health, nutrition and family planning (HNFP) as another indicator of effectiveness.

Recommendations

This study points out that PHC as a strategy merits full support since it is able to reach out the target sector towards which the policy is intended. It is noted that the more depressed segments of the population are the ones given priority by the BHWs and have thus been able to improve their knowledge of PHC policies and their actual health practices.

Second, the BHWs supplement the services delivered by the Department of Health without cost, except for some technical services to enrich the activities of the BHWs.

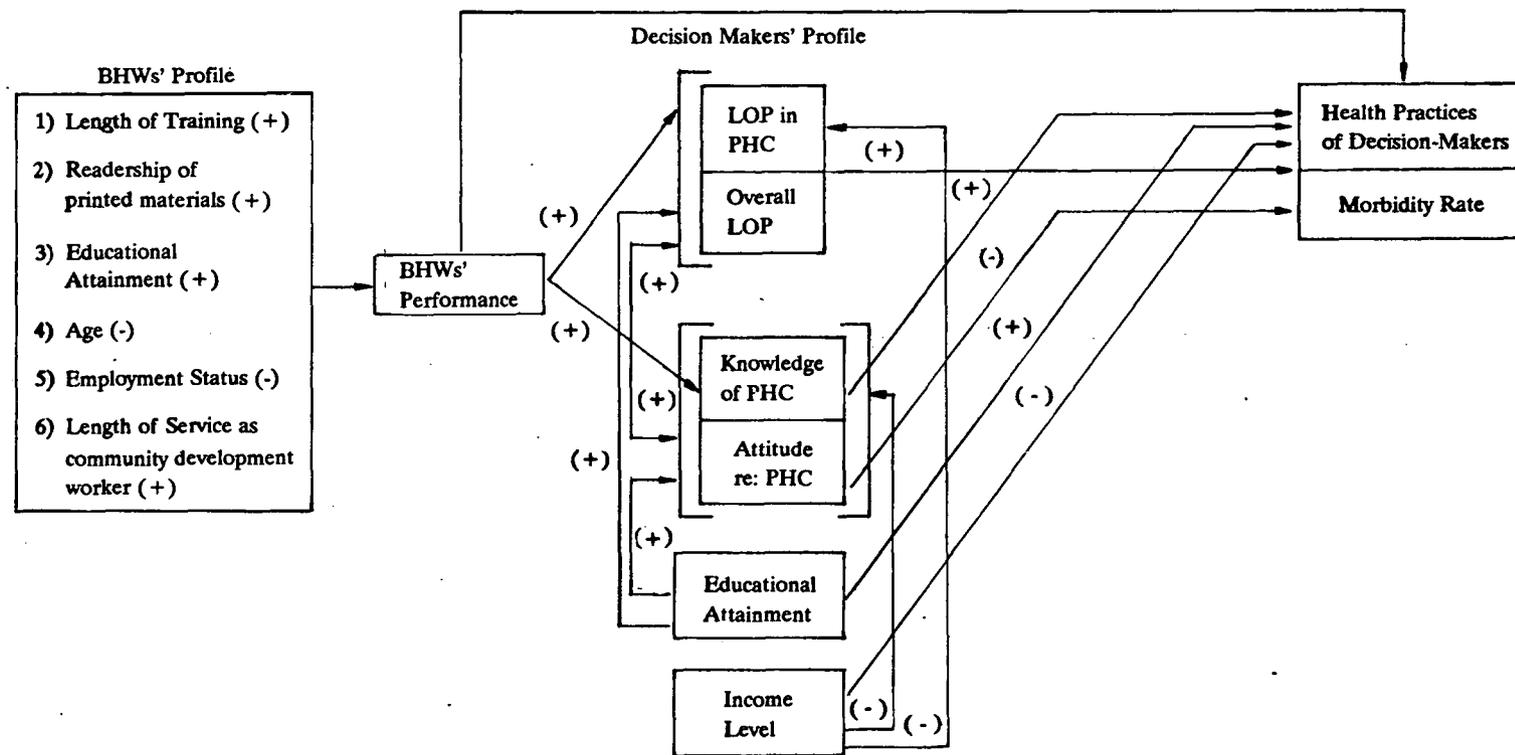
Third, the BHWs are based in the community and are aware of the kinds of problems that actually beset the populace. For this reason, even the respondents of the study have generally rated the performance of the BHWs as satisfactory since they are responsive to the needs of the community.

In order to strengthen the mechanics to implement this strategy, some policy issues need to be addressed in order to clarify the direction of its implementation. Four broad issues are discussed. These are with regards to: the Barangay Health Workers, the role of citizen participation, the health support system and the citizens themselves.

The BHWs

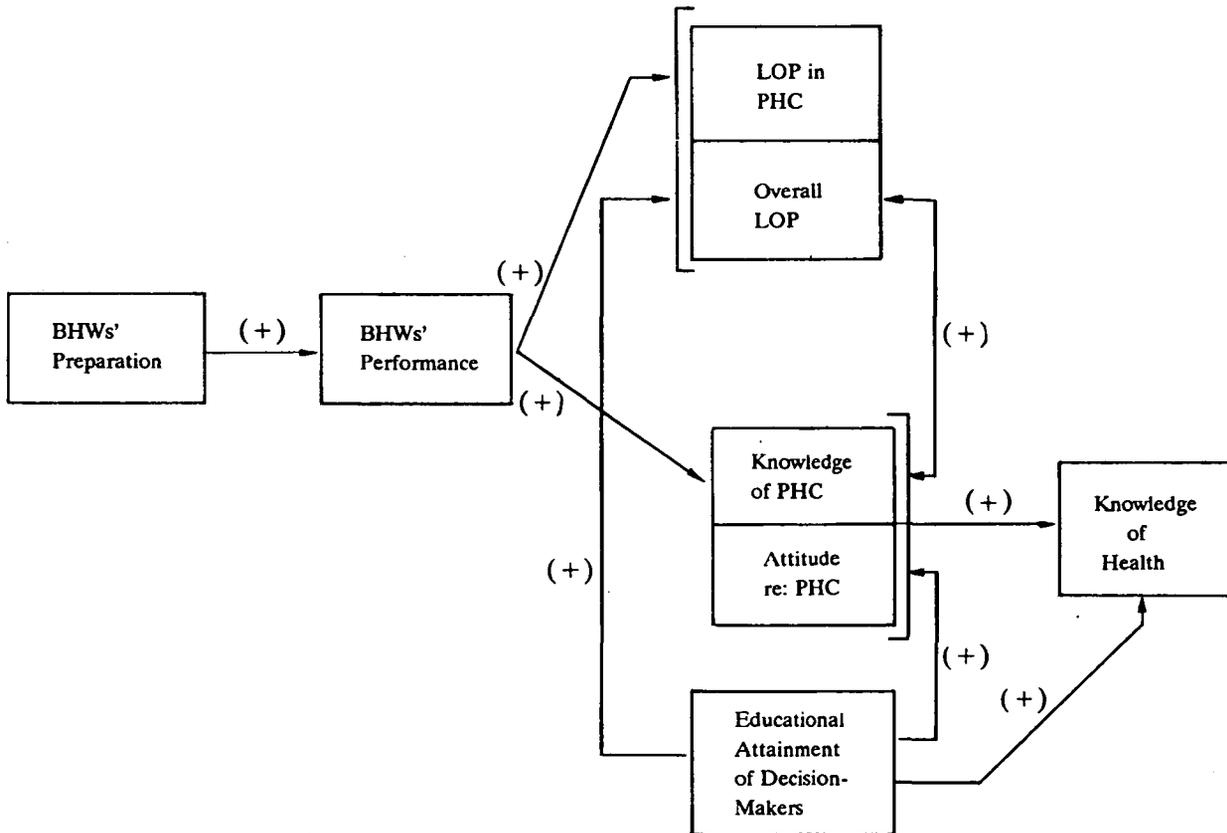
Health Service Delivery or Social Mobilization. The policy statement on PHC indicates the importance of the role of the BHW in mobilizing the community residents

Figure 2. The Factors Related to Effectiveness: Focus on Decision-Makers¹



¹The signs indicate the direction of the relationship

Figure 3. The Factors Related to Effectiveness: Focus on Dependents



in identifying the activities they are to undertake. This is on the assumption that the citizens are the ones who are best able to identify the activities which are responsive to their problems and needs.

In implementation, however, we see that the BHWs have served as "adjunct" to the government's health network. They are purposely trained to be able to deliver health services that respond to the government's five impact programs and other thrusts.

Hence, it seems necessary to define exactly what the stand is of government regarding the actual role of the BHWs. If this is clarified, the subject matter of the training program to prepare the BHWs can be geared towards the roles they are to assume.

An assessment of the subject matters covered in the training of the BHWs point to the emphasis given to topics concerning health maintenance and the prevention and control of diseases. Very little emphasis is given regarding social mobilization. This could be the reason why citizen participation in PHC activities is not yet extensive.

Motivating the BHWs. It seems urgent to address the issue of how the BHWs' enthusiasm to extend voluntary services can be sustained. It should be appreciated that the bulk of the BHWs who assumed the position considered this for humanitarian reasons. However, if they are themselves engrossed with the problem of economic self-sufficiency, the prospect of assuming the role for a sustained period of time or devoting to it their undivided attention is considerably lessened.

It seems necessary to examine various options to motivate the BHWs. Ways to finance PHC needs to be studied--particularly those that are community-based and participatory. The resources raised by the community could be the main source of incentives for the BHWs.

Training the BHWs. Training still remains to be an important process to prepare the BHWs. This should not only be confined to prepare the BHWs for their roles. Training may also be undertaken while the BHW is already on the job.

Alternative ways to keep the BHWs informed should be encouraged so that the BHWs can keep abreast with the latest information that can enrich the performance of their role. This study shows that printed materials do have a contribution in raising the knowledge level of the BHWs. This can be tried as an option if in case re-training within a "classroom" type of structure is going to be expensive.

Furthermore, in the training of potential BHWs, those already on-the-job may be considered as trainers themselves. They may provide a wealth of experience and can enrich the perspectives of those who are about to assume the position. It is noticeable that the function of training has primarily relied on the DOH network.

Citizen Participation

Encouraging people to participate in community activities remains to be a problem. While this activity is the central strategy in PHC, citizen participation is still minimal. Furthermore, this is mainly confined in the process of implementation.

Perhaps it can be asked to what extent the governmental authorities have really allowed genuine participation to flourish. While in the past, a number of scholars have considered poverty as the major factor that inhibits citizen participation, this study has shown that more involvement has been inspired by the BHWs among those with low income. The only problem is that the activities to be implemented are decided upon by the BHWs themselves or the DOH network.

Other participatory activities have yet to be tried such as in the processes of planning and evaluating impact of the activities undertaken by the community. Participatory strategies can also be encouraged in the identification of the BPHCC members and the BHWs.

Health Support System

Equity. It seems necessary for government to equalize the distribution of its resources. The peripheral areas still suffer in comparison to those located near the center of power and authority.

Self-Reliance v.s. Dependence. It can be recalled that the BPHCC members, the BHWs and the citizens have ambivalent feelings about the role of government in responding to health problems of the populace. While they favor the importance of making people self-reliant in responding to their health needs, they also consider it right and proper to "depend" on government for their health problems.

This contradictory perspective is understandable inasmuch as majority of the citizens are below poverty level. They deem it justifiable to look up to government as a source of support when health problems arise.

The problem of economic self-sufficiency is a matter that cannot be taken for granted. People can help themselves only if they have enough opportunities to improve their lot. Hence, one important form of support government can give is to encourage the private sector to establish more businesses in order to open up more employment opportunities. More self-reliance may thereafter be encouraged regarding health matters.

Since the bulk of the citizenry still falls below the poverty line, it may be difficult to expect the people to be entirely self-reliant. Some basic resources may have to be provided to forge preventive health care such as a potable water system, immunization and medicines.

Formulating Measurable Indicators. The attempt of the DOH to classify barangays to varying levels of PHC is a very helpful practice particularly to those monitoring the progress of PHC. The effort of DOH in formulating the indicators as a basis for assigning barangays in specific levels of PHC implementation is a laudable accomplishment.

Nevertheless, some improvements can still be made on this set of indicators to make the items more measurable and more simple, to facilitate the process of evaluation. For example, for Level I barangay, called "Social Preparation/Awareness Level," one

indicator could be the specification of the actual percentage of leaders and residents who have attended the information campaign regarding PHC.

Level II, labelled as "Leadership Organization Design" can have as one indicator, the existence of a functional BHW and a BPHCC or a similar structure.

Level III can have as an indicator, the existence of functioning activities undertaken by the community.

Level IV could be indicated by attainment of a self-reliant community when the local governmental structure has existing developmental plans that incorporates PHC activities.

Reassessment. It may also aid the DOH network which has taken charge of monitoring PHC if a reassessment is made of barangays in the higher levels of PHC. This is suggested because some barangays in the higher levels might have regressed in performance and appropriate measures can be implemented in order to respond to their problems.

Facilitating Coordination. The participation of some organizations which have shown interest in PHC has enriched the process of implementing PHC. Hence, motivating coordination with other agencies is very important. One way of assuring cooperation is to urge the top leadership of various organizations to endorse the PHC strategy and to assure that their respective personnel will be given the opportunity to participate in the endeavor.

Role of the Dependents

The dependents in the household constitute an important segment whose potential contribution to PHC cannot be taken for granted. Some dependents in the family also perform some decision-making for health matters. The dependents can therefore, be equally tapped to participate in community activities that will be helpful in the promotion of health. However, the data show that very little attention has been given to this group by BHWs to get involved in community activities.

Furthermore, it may also be considered as a policy that awareness about health maintenance should be the concern not only of mothers and heads of families. It should also be spread to all sectors of the population, starting with the young.

Hence, the information campaign should be emphasized not only in the home but also in school. The educational system should incorporate the idea of PHC--where the citizen's responsibility in the maintenance of health is an important dimension. While Health and Science is a subject matter that is included in the primary education curriculum, the campaign on the role of each citizen in maintaining health not only in the home but in the community, should be incorporated. This is a matter that should be of general concern and should reach various sectors of the population.

Endnotes

¹Ámparo Banzon, "Primary Health Care in the Philippines," paper presented to the 8th SEAMIC Workshop in the Philippines, February 3-9, 1981.

²University of the Philippines, College of Public Administration, "A Study of the Implementation of the Primary Health Program in Twelve Regions." A study commissioned by the Ministry of Health, Vol. I (Manila: UP-CPA, 1982), p. 32.

³Population Center Foundation (PCF), "A Program Report on the Status of Primary Health Care in the Philippines," prepared for the Ministry of Health by PCF (December 1983), pp. 106-108.

⁴Victoria A. Bautista, "Assessing PHC as a Strategy in Health Service Delivery," Volume I, submitted to the Training and Development Issues Project of the National Economic and Development Authority (Manila: UP-CPA, February 1988).

⁵*Ibon Facts and Figures*, "The Economy in 1985," No. 28 (February 25, 1986), p. 8.

Appendix A

Scoring System for Health Practices

I. Health Resources and General Health Practices

<i>Indices</i>	<i>Score</i>
1. Ownership of Toilet	
Yes	1
No	0
2. Type of toilet used (whether in one's house or the neighbors)	
Flushed/water-sealed	3
Antipolo	2
Open pit/open space	1
3. Manner of disposing of garbage	
Burned/composted	2
Collected/dumped in specified place	1
Dumped near one's yard	0
4. Manner of maintaining animals, if any	
All/some fenced in or caged	3
All/some are tied	2
Free to roam around in the yard	1
Free to roam around in the house	0
5. Existence of fence around the house	
Yes	1
No	0

6. Existence of food-bearing plants in the yard	
Yes	1
No	0
7. Availability of medicinal plants in the yard	
Yes	1
No	0
8. Presence of stagnant water in the yard	
No	1
Yes	0
9. Presence of animal waste and/or garbage in the yard	
No	1
Yes	0

II. Nutrition

1. Number of meals eaten daily	
Three	3
Two	2
One	1
2. Food eaten for breakfast	
Combination of cereal, protein, and fruit	3
Combination of cereal and protein	2
Combination of cereal and fruit	2
Others taken singly	1
Beverage combined with milk	1
3. Food taken for lunch and supper	
Cereal, protein, vegetables, and fruit	4
Cereal, protein, and vegetables	3
Cereal, protein, and fruit	3
Cereal and protein	2
Cereal and vegetables	2
Cereal and fruit	2
Any food taken singly	1

III. Health Practices for Children

1. Type of milk given or preferred to be given to babies	
Breastmilk	2
Other Milk	1
2. Milk considered to be best for babies	
Breastmilk	2
Other Milk	1

3. Gave immunization to those with children who are 3 and below	
Complete immunization for all	2
Gave at least one to all or some	1
No one was given	0
4. To those without babies: Would they have had their children immunized, if they had any	
Yes	1
No	0

IV. Family Planning Practices

1. Currently practicing/practiced/would likely practice family planning	
Yes	1
No	0
2. Method preferred	
Ligation/Vasectomy	3
Pills/IUD	2
Rythm/condom/withdrawal/abstinence/foam	1
None	0