HEALTH - SEEKING BEHAVIOR OF PTB SYMPTOMATICS

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Introduction

Tuberculosis remains a public health problem in the Philippines. As revealed in the National Prevalence Survey conducted in 1981-1983, the prevalence rate of sputum positive for all ages was 6.6/1,000 population and 9.5/1,000 persons for 10 year-olds and above. Among persons 20 years or older, 28 percent had symptoms suggestive of tuberculosis, and 17 percent were classified as TB symptomatics based on the National Tuberculosis Program (NTP) criteria.

In Region XI, tuberculosis has ranked as the fourth leading cause of mortality at 24.12/100,000 population and the seventh cause of morbidity at 271.33/100,000 population the past five years. Moreover, it accounted for seven percent of the total registered deaths (11,743) in 1990. In 1978, the basic control service of the National Tuberculosis Program, namely, BCG vaccination, was integrated into the regular activities of the Regional Health Office. In 1986, the triple drug regimen, using short course chemotherapy (SSC), was implemented nationwide. Since then tuberculosis has declined at an average of one percent per annum for the last five years.

The yearly computation of targets for the region was formulated by the Central Office in Manila using the 6.6/1,000 population prevalence rate of sputum positive and the eight percent prevalence of TB symptomatics as baseline. Region XI has trailed behind the other regions in identifying 40 percent of its eligible population. The region identified only 17 of the target and 17.5 percent of the expected sputum positive cases. Using a ranking system from 1 to 64, the Central Office ranked the provinces based on the levels of accomplishment in 1989. South Cotabato was given a rank

"30", followed closely by Davao Oriental (Rank "32") and Surigao del Sur (Rank "38"). Davao del Sur and Davao Province were however, ranked much lower, i.e. "61" and "63", respectively. In 1990, the regional performance increased significantly. Based on the 45 percent target, Region XI identified 55,200 (45.38%) symptomatics and 4,386 (43.25%) sputum positive cases *while slide positivity rate increased to 7.94 percent.*

Reviewing the various experiences and needs of the program, medical practitioners have recognized that the identification and treatment of sputum positive cases are the most cost efficient and effective way of controlling the transmission of the disease. Noting the continued low performance of NTP case findings in Region XI, a sociological study has been undertaken focusing on the health-seeking behavior of symptomatics as well as the quality and quantity of services rendered by the health personnel, including facilities. It will hopefully serve as a basis for a relevant and realistic planning program for tuberculosis control in the region.

The study hoped to provide information on the problems besetting program planners and implementors. Survey results may then serve as a guide for program managers in implementing a more responsive program strategy in Region XI.

Objectives of the study

In general, the research undertaking addressed the health seeking behavior of PTB symptomatics in the region. Specifically, it sought:

1. to describe the nature of health-seeking behavior of PTB symptomatics

2. to determine the factors affecting health-seeking behavior among PTB symptomatics, e.g. awareness of the disease, interpersonal influence, attitude towards health providers, access to health services and attitude towards patients of PTB.

The assumptions made in this study were based on the decision steps in the sickness career of Twaddle et. al. [1] These decisions constituted the following process: a decision that the change is significant, that help is needed; a decision to see a particular treatment agent and finally, a decision as to the degree and type of cooperation offered to the treatment agent.

Thus, health-seeking behavior is defined as the response to symptoms which can be in the form of seeking professional help, seeking traditional healers, self-medication or taking no action at all. The results of the study of the National Tuberculosis Program in 1988 revealed that among the 65 percent TB symptomatics who took action, 39 percent resorted to self-medication, 26 percent went to private practitioners, 22 percent approached the public health centers, 9 percent went to hospitals, and the rest failed to take any action whatsoever. Jimenez, in a study of the utilization of health services (1986) likewise reported that the community and households generally availed of the health center, a government-operated institution, and the *hilot* (the traditional birth attendant).[2] Moreover, physicians observed that some patients were usually not concerned about whatever TB-symptoms they felt until they were very sick, due to problems of funds as well as ignorance about the disease.

The response of the symptomatics varied according to their knowledge of the disease: its causes, methods of transmission, signs and symptoms and complications, its treatment and its prognosis. Dr. Conanan, in his study of the factors affecting the completion rate of Tuberculosis Short Course Therapy (TSCP) identified the level of awareness about the disease, especially regarding its transmission, as one factor affecting compliance with the therapy regimen. [3] Another study by Twaddle and Hessler in

[1] Andrew C. Twaddle and Richard Hessler, *A Sociology of Health*, (St. Louis: C.V. Mosby Co., 1977).

[2] Pilar Jimenez et. al., *Health and Nutritional Problems and Utilization of Health Services*, Research Report 2, Vol. 1 Research Center, de La Salle University.

[3] Emmanuel Conanan and Francisco Valez, "Factors Affecting the Completion of Tuberculosis Short Course Therapy (TSCP)," *The Journal of the Philippine Medical Association* vol. 64 (January - March 1988).

Sociology of Health also showed that the more unfamiliar the symptoms are, the more threatening they will seem to be, and thus, the more likely that they will be defined as serious. Hence, the more likely the sick person will respond to the symptoms. [4]

Interpersonal influence refers to the lay referral system with whom the symptomatics confer about their symptoms. This consists of husbands or wives, relatives and friends. Twaddle and Hessler pointed out that people generally confer with each other and the advice they receive influences the kind of decisions they make. Their friends or relatives guide them onward to or away from proper medical care. Observations of medical personnel also showed that many symptomatics who go for treatment usually have experienced self-medication as a result of advice taken from a person who has experienced the same symptoms or disease. Because of the increased cost of institutionalized medical care, the symptomatics usually try out cheaper alternatives — whether through self-medication, seeking advice from others, or even trying out medicine others have received for what is perceived as a similar illness. When these fail, only then will the symptomatic person — still reluctantly at that — finally decide to consult a physician and try out his prescription or advice.

The action of symptomatics may vary according to their attitudes towards the health providers. Montepio, reports that barrio folk are likely to seek the assistance of the *hilots* because they are more personal, inexpensive and are regarded as one of the community members who are always available during social events. [5]

A number of DOH personnel indicated that some patients expressed negative sentiments towards government health personnel in general, i.e. as being too busy to attend to all their patients and hence, failing to properly communicate to their patients regarding their illness and medications. Symptomatics

[4] Andrew C. Twaddle and Richard M. Hessler, *A Sociology of Health*, (St. Louis: C.V. Mosby Company, 1977)

[5] Susan N. Montepio, "Folk Medical Practices in the Barrio: Their Implications for the Rural Health Program", *Social Science Information*, vol. vi (July to September 1978).

who are able and willing to pay are likely to consult private physicians to facilitate therapy. It is perceived that private physicians who get paid provide better and faster service as well as smoother doctor-patient relations than those in the government health service.

Jimenez, further noted various but often contradictory feelings about the health providers which affect utilization of the health facilities. Some respondents claimed to be uncomfortable or unfamiliar with the health personnel, and thus had some doubts or fears about their ministrations. On the other hand, the same study revealed that the majority of those who approached the different health providers were satisfied with the services obtained. These center-users mainly attributed their satisfaction to the effectivity of the treatment, efficiency and competence on the part of the providers, and the accommodating attitudes of the center staff.

The distance from the residence to the clinic or health centers, the availability of medicines and other services, and the regular availability of health providers likewise affect health-seeking behavior.

Patients to be enrolled in the National Tuberculosis Program (NTP) are required to undergo x-ray or sputum examination. The entire program thus requires the availability and involvement of the health centers and their manpower to encourage the patients to avail of such services. A breakdown in any of the steps needed to keep the patients on line for their successful treatment, e.g. the absence of medicine or the health worker, may easily discourage patients including those with no other health alternatives.

In the absence of related literature on this variable, observations show that strong feelings of resentment and shame felt by PTB patients because of group rejection of TB patients may also affect health-seeking behavior. The possible stigma of having tuberculosis oftentimes results in the patient ignoring the symptoms and refraining from seeking any professional help.

Thus it is hypothesized that health-seeking behavior is related to awareness of diseases, interpersonal influence, attitude towards

health providers, access to health services and attitude towards patients of PTB.

Results of the Study

Characteristics of Respondents

The respondents' ages ranged from 10 (youngest) to 81 years (oldest) with a mean age of 44 years. The bulk of the respondents belonged to the productive ages, from 18 to 65 years old (83.3%). About 7 percent were young dependents and 9.7 percent were old dependents. Such findings suggest that tuberculosis generally affects those in their productive years.

Female-respondents outnumbered their male counterparts. Slightly more than half of the respondents (54.3%) were females. Sex ratio was computed at 84:33.

Close to half (47.2%) of the respondents were unemployed. Those employed were mostly involved in agriculture, particularly as farmers or fishermen (28%). Others — in descending order — were businessmen or engaging in "buy-and-sell" activities (5.5%), in stevedoring (4.8%), in transport and communication (2.8%), in crafts or production activities (2.5%), in services-related works (0.8%) and clerical works (0.5%). Two of the respondents failed to indicate their occupations.

Data likewise revealed that a greater majority of the respondents (98%) reported having attended school. Close to two-thirds (62%) completed their elementary education. Others received secondary education (30%), with a very limited group (6%) attending college. It is interesting to note that 8 respondents (2%) have never been to school.

Noting that the majority have had at least some formal education, survey results suggest possibilities for using educational strategies to minimize tuberculosis cases in the region.

Slightly more than three-fourths (75.8%) of the respondents were married. The others were single (14.8%), widows or widowers (9%), or separated (0.5%).

The single biggest group of the respondents were Ilonggos (33.5%), followed by Cebuanos (24.7%) and Davaoeños (11.5%). Other ethnic origins include Boholano (9.5%), Leyteño (5.5%), Surigaonon (4.7%), tribal groups, e.g. Muslims, Mansaka, Bilaan, Manobo, and Hapon-Kalagan (3.7%), and Ilocanos (3.7%). The rest were either Bicolanos (0.8%), Negrosanon (0.8%), Cagay-anon (0.5%), Tagalog (0.5%), Pangasinense (0.3%) — and even included one respondent from Indonesia (0.3%).

Of the total respondents, more than half (57.5%) were rural dwellers, with urban residents comprising 42.5 percent.

Nature and Severity of Symptoms

Respondents were asked whether they had experienced such symptoms as coughing for at least two weeks' duration, fever, chest or upper back pains, and hemoptysis during the last two months preceding the date of interview.

Coughing was the most cited symptom, both singly or in combination with other symptoms, followed by upper back pains (68.5%) and chest pains (54.5%). The less common symptoms were low-grade fever (13.2%) and hemoptysis (14.2%). The most frequent symptom-combination was cough and upper back pains (14.2%). In general, the data suggest that cough was the most persistent (45.9%) symptom, followed by upper back pain (38.7%) and chest pain (38.1%).

The duration of the symptoms of the respondents varied widely from at least 85 weeks for low grade fever to as much as 153 weeks for progressive weight loss. The duration of symptoms within each of the five symptom-categories varied widely with a tendency towards chronicity.

Respondents were likewise asked about the perceived causes of the symptoms felt. They attributed the cause of all the symptoms such as cough (49.3%), fever (47.2%), chest pain (58.9%), upper back pain (64.2%), hemoptysis (57.8%) and progressive weight loss (14.1%) to over fatigue. The other significant causes of cough

were over exposure to weather (12.7%), sprain, *panuhot, pasmo* and *bughat* (10.5%) and too much drinking and smoking (10.5%). For fever, the other causes mentioned were sprain, *panuhot, pasmo* and *bughat* (13.2%) and over-exposure to weather (9.4%).

For chest pain (10.5%), upper back pain (8.8%) and hemoptysis (12.3%), the most commonly mentioned cause was coughing. Progressive weight loss was also attributed to too much worry (15.8%), sprain, *panuhot, pasmo,* and *bughat* (10.8%) and other respiratory causes such as asthma and weak lungs (10.8%). Only few respondents attributed the symptoms to lung infection (cough - 4%; chest pain - 2.3%; upper back pain - 2.6%; and hemoptysis - 3.5%).

Based on the survey data, it appears that respondents did not think of their symptoms as caused by a bacteria but rather by natural processes, such as imbalance of bodily functions or by environmental factors. The data further suggest that the symptomatics tended to explain the causes of illness themselves and may not have found further extensive diagnosis important because the cause of the illness was already known.

Nature of Health Seeking Behavior

Twaddle and Hessler explained that one way of understanding the complexity of human behavior in response to symptoms requires that one look at the social processes that influence behavior. The stages of decision-making that an individual undergoes are useful in analyzing the health-seeking behavior of TB symptomatics. However, difficulty of recalling past events makes it difficult to determine the actual sequence of events in the stages mentioned by Twaddle and Hessler.

The same authors described the stages of decision-making that sick people undergo as follows: that some change from normal health has occurred, that the change is significant, that help is needed, that a particular type of help is preferable, that a particular treatment agent or setting is most appropriate, and that certain types and degrees of cooperation with a treatment agent are optional.

Based on the first decision, symptomatics should be able to recognize that the symptoms are significant, i.e. that there is a significant change from their normal state. Mechanic and Twaddle have listed aspects of symptoms that influence judgment of severity. The first one is the extent to which the symptoms interfere with normal activities or characteristics. "The more a symptom inconveniences an individual in question or others, the more that it will be interpreted as significant." In the light of such a premise, respondents were asked whether the symptoms bothered them or not. The responses showed that about 69.3 percent responded positively and 30.7 percent said otherwise. Probed further, the respondents cited various reasons for feeling bothered, namely: that the pain or cough disturbed their regular activities, e.g. they could not work smoothly because of constant coughing or back pain (82.3%); disturbed their sleep and their rest-periods (7.2%); they felt either weak (4.7%) or ill (2.5%). Those who did not feel that symptoms were bothersome explained that the symptoms were tolerable (64.2%) and were not persistent (34.1%).

Likewise, respondents were asked whether they felt sick or not. About 78.3 percent felt sick and only 21.8 percent said otherwise. Such findings suggested that the respondents were mostly aware that something was wrong with them. Those who did not feel sick mainly explained that they were not prone to such diseases i.e., they had the feeling of being strong and not susceptible to diseases (74.7 percent). Twelve percent (12.6%) said the symptoms were not persistent, 9.2 percent noted that their illness was tolerable, while 1.1 percent believed that the symptoms were not serious. Based on survey results, it appeared that most of those who did not feel sick denied there were significant changes in their body and others were more tolerant of the symptoms.

Asked whether they felt something had to be done about their symptoms, the majority answered in the affirmative (96.5%). Likewise, the majority reported having taken steps towards relieving them of their symptoms (89.0%). Those who did not do anything to relieve them explained that the discomfort was tolerable (70.1%). Still, others cited monetary constraints (18.1%) and the usual reluctance in asking help (9%). Among the 400 respondents, a significant majority (88.5%) had actually undertaken a number of activities to relieve themselves of their symptoms.

Among the first actions taken, the most dominant were consultations with medical personnel (31.0%) and self-medication (26.0%). Follow-up activities, i.e. the second action taken, likewise consisted mainly of consultations with medical personnel (21.3%) — including consultations with spouses, relatives and friends (15.5%). The third activity undertaken showed that consulting with spouses, relatives and friends (13.5%) was generally preferred to visiting medical personnel (9.0%). Self-medication was the least preferred (2.5%).

Given all the actions taken by the respondents, the mean rank was computed to determine which of the actions were most likely taken by respondents. On the whole, respondents were generally engaged in self-medication (mean rank of 1.45). The second action taken by the respondents were consultations with traditional healers (mean rank of 1.77), while the third action taken was consultation with medical personnel (mean rank of 1.80). Consultations with spouses, relatives and friends were least preferred (mean rank of 2.06). Such survey findings follow closely the results of the National Prevalence Survey on Tuberculosis in 1981-1983 reporting that TB symptomatics resort to self-medication first before going to the private practioners and the health centers.

The findings suggested that, given the respondents' awareness of their symptoms and their realization that something had to be done to relieve them of such symptoms, they generally resorted to self-medication. Obviously, such actions by respondents lacked necessary professional diagnosis.

When asked how soon they sought help to relieve themselves of the symptoms felt, more than half (51.8%) claimed that they sought help as soon as they felt the symptoms specifically, less than a day. On the other hand, 26.3 percent sought help within a week's time. A minimal number sought help either more than a week after feeling the symptoms to as much as within a year. On the average, the respondents sought help within 24 days.

More than one-third (41.8%) of the respondents claimed they resorted to self-medication. They took medicines or drugs without the prescription of the doctor. Most of the respondents (27.5%) took cough preparations — mucolytic antitussive or bronchodilator,

followed by those using analgesics, muscle relaxants and pain relievers (25.1%). Others used herbal preparations, i.e. poultices like *tuba-tuba, buyo* (19.8%), antibiotics (5.4%), anti-TB drug (8.4%) and vitamins (3.6%).

Among the drugs used, anti-TB (INH) had the longest mean duration of 115 days, followed by the use of vitamins (102 days). The shortest mean duration was the use of antibiotics (7 days). The common use of cough preparations and analgesics suggested that the respondents tended to treat the symptoms rather than treat the real cause of the disorder. They seemed to be more concerned with temporary relief rather than with treating the disease itself. The drugs used were over-the-counter medicines.

The respondents were asked from whom they learned about the use of drugs. Neighbors and friends constituted the single biggest group providing such information (25.1%), followed closely by one's own knowledge (21.0%), and parents (16.8%). It is interesting to note that health workers were mentioned by a limited group (8.4%), along with mass media such as radio, magazines and books (7.2%), traditional healers (3.0%) and drugstores (3.6%).

Asked whether they were relieved by the various drugs taken separately, more than three-fourths (89.3%) claimed they felt some improvements. About 42.7 percent reported complete relief and only 14.0 percent admitted not being relieved at all. More than a fourth (26.5%) of the respondents sought the help of traditional healers. These traditional healers who were consulted were *hilots* (84.9%), *herbolarios* (12.3%), *spiritista* (0.9%) and a pranic healer (0.9%). As noted, the *hilots* were the most popular.

When asked what remedies were given to them, the respondents said that the most commonly used were liniments such as "Omega", "Vicks Vaporub", and efficascent oil (52.8%). This was followed by poultices (21.7%) like the use of *tuba-tuba, buyo , mayana* and others. The other less popular ones included combinations of poultices and massage, poultices and food preparations, magico-religious rituals and prayers and others; concoctions of ginger, gas, alcamphor and salt (1.9%), tablets (1.9%); rests (0.9%) and decoction (0.9%).

All the respondents admitted following the advice given by traditional healers. More than three-fourths (76.4%) said they were relieved by the remedies given by the traditional healers, with 18.9 percent claiming otherwise. About 4.7 percent failed to answer the question.

A little more than one fourth of the respondents (28.3%) reported having sought the help of the traditional healers for more than one month but less than one year. An equal proportion said they sought the help of the traditional healers for a one-month period (26.4%) A limited few sought the assistance of traditional healers for more than one year (4.7%).

The respondents revealed that they preferred to go to the traditional healer primarily because they specialized in particular ailments not known to the doctor (41.1%). Other reasons cited were the belief that their medicines provided immediate relief (14.2%), their inexpensive service-charges (20.8%) and convenience (11.3%). Still others cited these healers' familiarity with them (4.7%), including the perception that the disease is not serious enough to require professional medical attention (1.9%), among others.

They were asked to enumerate and rank the medical health workers consulted. Most of the respondents mentioned the private doctor (42.3%) and the health center midwife (30.2%) as the health personnel consulted. In terms of preference, the private doctor was the most popular choice (mean rank of 1.1), followed by the government hospital doctor (mean rank of 1.2). The health center midwife, who is based in the community, was considered their third choice. The last choices were the health center nurse, the Barangay Health Workers (BHWs) and government hospital nurses. Only 12.2 percent consulted the Barangay Health Workers which further supports the low preference of respondents for BHWs. This finding suggests certain implications with regard to the utilization of BHWs as "frontliners" of the Department of Health (DOH). The BHWs are expected to have more interaction with the community because they reside in the community where the symptomatics reside. It is expected that symptomatics would consult the BHWs first, who would then assess their symptoms and give appropriate advice.

The most predominant advice given consisted of following a drug prescription (65.3%) and observing adequate rest (41.6%). The other dominant advice was to have a sputum examination (34.7%), x-ray (30.5%) and proper nutrition (28.6%). The data seemed to show that the practice of medical personnel was to prescribe drugs immediately rather than working up the patient for the cause of the symptoms. Other medical personnel tended to treat the client symptomatically.

When asked which of those medical advices were difficult to follow, all respondents were unanimous about the difficulty of changing their lifestyles, e.g. to quit smoking or drinking or need to change jobs. The others likewise complained about consulting the health center (22.2%), securing x-ray examinations (15%), receiving proper nutrition (14.7%), following drug prescriptions (14%), and taking adequate rest (13.8%).

Respondents were asked whether they followed the advice given by the medical personnel. More than half (59.9%) followed the advice and 29 percent admitted partial compliance. The data tended to show that compliance with medical prescriptions was also inadequate.

Of the 80 TB symptomatics who were advised to have x-ray examinations, 73 complied. The majority (56.2%) of those x-rayed were diagnosed to have tuberculosis. Three percent did not know the results of the examination. It was reported by symptomatics from the rural areas that chest x-ray examinations were usually done in the district/provincial hospital. Oftentimes, patients were requested to return at a later date to get their results. Some patients failed to comply and thus, they did not know the results of the examination at the time of the interview.

On the whole, among the respondents who underwent physical examinations, 44 percent had positive results and an almost equal percentage had negative results (41%). This indicates that the symptoms felt by respondents were not necessarily due to TB. However, a medical work up may be necessary to determine the severity of the symptoms.

Ninety TB symptomatics were advised to submit sputum for examination. Ninety percent or 88 of them did so and among these, 34 percent were found to have tuberculosis while 25 percent did not know the results of the examination. Unavailability of results of sputum examinations was a common complaint among TB symptomatics, especially those availing of the services of rural health units where there were no medical technologists and/or midwife-microscopists. Consequently, slides had to be read by medical technologists at the district hospital.

Of the respondents who had positive chest x-ray and sputum examination findings, 9.8 percent and 6.7 percent, respectively, did not do anything about their conditions. This is consistent with the previously mentioned findings that 21.8 percent of the respondents did not feel vulnerable to the disease and therefore, they did not do anything despite the positive findings. About 63.3 percent of those with positive sputum exam results were already receiving anti-TB drugs — perhaps on the strong suspicion that they had TB.

More than one-third (34.0%) of those with positive sputum exam results were reportedly placed on single or double anti-TB therapy which is contrary to the standard treatment protocol for tuberculosis. Sputum positive cases are "open cases" or highly infectious sources of TB. If they are inadequately treated they will continue to spread the infection.

Two hundred sixty two (262) respondents who consulted medical health personnel were given drug prescriptions. Sixty-two percent (62.3%) were given anti-TB drugs — 26.2 percent single, 10.5 percent double, and 25.6 percent triple. They reportedly took these drugs for 83, 77 and 185 days, respectively. Hemostatic agents, tranquilizers, cardiotonic medicines, anti-angina and multivitamins were the other medicines prescribed/given by health professionals.

Furthermore, 93 percent of those who were given medicines to take claimed that they followed the prescribed treatment. Lack of money to buy the prescribed medicines or unavailability of the prescribed medicines at the health center were the main reasons for those who failed to follow the prescribed treatment.

Interpersonal influences refers to the lay referral systems, i.e. those individuals whom symptomatics ask regarding their symptoms other than those who have training in medicine. They either give them proper directions or they direct them away from proper medical care. Recognizing the importance of identifying these people who likely influence symptomatics, the respondents were asked "Whom did you consult with other than the medical personnel regarding your symptoms?" The spouse was considered as the individual likely to be consulted first (mean rank score of 1.03) and parents came next (mean score of 1.17). Other significant people mentioned according to the sequence of consultations were relatives, and neighbors and friends (mean scores of 1.33 and 1.95, respectively).

Asked what advice was received from other persons, more than half mentioned that they were advised to seek medical help (58.1%), with one group (17 percent) being advised to consult traditional healers or to use herbal medicines (5.4%). About 14.5 percent were advised about using certain drugs, 11.2 percent were told to rest, and 5.4 percent were advised to stop smoking and drinking. While the advices given were varied, most of the respondents were, on the whole, encouraged to seek such medical help. However, still a larger proportion had been advised to use the traditional way of treating their symptoms or to treat themselves, e.g. self-medication, use of herbal medicines and change of their lifestyle.

Those who consulted persons other than medical personnel reported having followed the advice of others (77.9%) while 22.1 percent did not. When asked why they did not follow the advice given to them, a little more than one third of the respondents (36.1%) mentioned financial reasons, 19.7 percent were preoccupied with work, 16.4 percent had difficulty stopping their vice like smoking, and 11.5 percent said their sickness was not serious. Other reasons were: doubt regarding the advice given (4.9%), relief with medicines taken (4.9%), and faith in God (1.6%).

Access to Health Services

Most of the respondents mentioned walking to the health center (93.7%). To determine the distance of their residence from the health center, the number of minutes walk to the health center was ascertained. The single biggest group reported that it took them more or less 5 minutes (37%) to walk from their residence to the health center. This was followed by those who said they took a 6-10 minute walk (23.2%) or an 11-15 minute walk (15.2%). Slightly over three-fourths of the respondents (75.4%) lived within less than a five to fifteen minutes walk to the health center. They walked for an average of 11.8 minutes. The farthest residence was more than 30 minutes away. The majority of the respondents said that they took a ride in going to the private clinic (67.7%) and 31.3 percent walked to the private clinic.

A large proportion of those who took a ride to the private clinic spent 26 to 30 minutes (34.7%) or an average of 24.57 minutes riding. This indicates that respondents lived farther from the private clinic than from the health center. The health centers appeared to be within walking distance from their residence.

Those who walked to the private clinic were those who lived nearer. The mean average was 18.4 minutes. The farthest respondents who walked to the private clinic spent more than 30 minutes walking. In terms of access to health centers and private clinics, the data showed that the respondents were likely to be nearer the health centers than to the private clinics. However, respondents have access to both health facilities. Rides seemed to be available even if private clinics were farther than the health centers.

Access to the health providers was also determined by measuring the distance — in terms of the number of minutes walking and riding — from the residence of the respondents to where the health workers were located, resided or held clinic.

A large proportion of the respondents walked (41.8%) to the place of the health providers and only 24.0 percent took a ride. Almost half of those who walked, spent 1 to 5 minutes walking to the place of the health worker (49.1%). About 21 percent spent 6-

10 minutes. Thus 70.1 percent had access to the health worker in terms of walking distance. The farthest walked more than 31 minutes to where the health providers are located (4.8%). The mean average was 13.36 minutes.

More than half of those who rode (54.1%), took more than 26 minutes to reach the place of the health provider. The distance from their residence was farther compared to those who only walked. The average number of minutes walk was 13.37 while those who rode took an average of 34.08 minutes.

Familiarity with Tuberculosis

An equal percentage perceived tuberculosis as dangerous and communicable (43.5%), and associated with symptoms of tuberculosis (43%). About 24.3 percent reported other causes of symptoms aside from tuberculosis like drinking and smoking, overfatigue, low back pain, lack of nutritious food, paleness, *pasmo*, heredity, change of climate, abuse of one's self and God's will. Less than one-tenth (9.3%) did not know about TB at all. Only 4.8 percent perceived tuberculosis as a curable disease. The respondents had the highest scores on knowing the activities to be undertaken when suspecting that one has tuberculosis (86.8%) and when TB symptomatics should go to the health center (70.5%). More than half knew about the cause of tuberculosis (67.8%) and the advice one should give to a person with tuberculosis (56.3%).

Respondents had low scores on items concerned with the prevention of the spread of tuberculosis (28.3%), the transmission of tuberculosis (40.8%), the type of medical exam a symptomatic should undergo (43%), the acquisition of tuberculosis (44.5%), and the effect of discontinuance of medication (45%).

Out of the 11-item test scores on knowledge about tuberculosis, the respondents had a mean score of 5.17. This indicates some knowledge but suggests the need to improve their knowledge on tuberculosis.

Respondents were asked to rate 1 for "strongly agree", 2 for "agree", 3 for "neutral", 4 for "disagree", and 5 for "strongly

disagree" on the statements related to one's attitude towards health providers. The attitude scale was pretested and the reliability was computed by correlating the odd-even items and computing each item score with the total item score.

The scores showed that the respondents tended to concentrate on the neutral category. It appears that the respondents tended to play safe by answering neutral. Interviewers observed that items which were negatively stated were the ones scored neutral. Only one negative statement had a definite negative response. The respondents disagreed with the statement that "the government should send their health personnel for training" (4.04). All positive statements had favorable responses. The statements with the most favorable response were: "Doctors and nurses know what they are doing" (1.96) and "patients must trust the medical personnel of the health center" (1.99). The respondents were least favorable on the statements: "Doctors and nurses can attend to all their patients" (2.36) and "patients are satisfied when they go to the health center because the medical personnel are always there" (2.32).

The respondents were asked to rate the statements on their attitude towards TB patients using the following scale: 1 ="strongly agree, 2 = "agree", 3 = "neutral", 4 = "disagree", and 5 = "strongly disagree". The overall mean score was 2.73 which was interpreted as being within the neutral category. Respondents agreed that it is alright for "the BHW to know that a neighbor has tuberculosis" (1.95), "that patients should not be afraid to consult a doctor" (2.0). While they agreed that TB patients need not be ashamed to let health workers know about their disease, they were favorable to the statement that "TB patients should be placed in the hospital ward for tuberculosis" (2.23), and "TB patients should not socialize" (2.27). Respondents were neutral about the statements that "TB patients should not get married" (2.63), and "TB patients can go to parties" (3.44). They did not agree with the statements that "It is better to take TB medicines secretly" (3.6) and "TB is uncurable" (3.77). It appears that, on the whole, the respondents were ambivalent about their attitude towards TB patients but showed positive responses on statements on TB patients needing treatment and socializing. However, they agreed that they should not socialize but that, on the other hand, they should not be deprived of their personal choices in life.

Correlates of Health-Seeking Behavior

The relationship between knowledge of tuberculosis and the first action taken by the respondents varied with place of origin, whether rural or urban. They were significantly related in the rural areas but showed otherwise in the urban area. In the rural areas, those who did not take any action had the lowest scores (31.1%) while those who took action had scores between 4 to 7. However, the scores of the urban respondents were concentrated in the 4 to 7 score range irregardless of action or no action taken.

In both areas, those who went to the medical personnel had the highest scores. Although those who consulted friends, neighbors and relatives in the rural areas had equally high scores with those who consulted the medical personnel. There was no difference between the first action taken and the attitude towards TB patients where the place of origin was concerned. This was especially true in the rural areas where the respondents tended to be neutral about their attitude towards TB patients irregardless of the action taken.

In the urban areas, those who self-medicated and who consulted their neighbors, friends and relatives had favorable attitudes towards TB patients. However, those who consulted the traditional healer, the medical personnel and those who did not do anything had neutral responses.

The first action taken and the attitude towards health providers were correlated. The results showed that in both areas there was no significant difference between the first action taken and attitude towards health providers. The respondents in the neutral category showed no difference in the action taken by them.

On the whole, the respondents resided on the average of 11.88 minutes walking distance from the health center. There was a significant difference between the first action taken and the distance from the residence to the health center in the rural areas. Those who resided near the health center tended not to do anything about their symptoms (24.4%), consulted the traditional healer (22.2%) or consulted medical personnel (21.3%). Those who lived far away tended to self medicate.

In the urban areas, the relationship between the distance of residence from the health center and the first action taken was not significant. The data showed that all of them seemed to reside near the health center. Distance did not seem to be a factor of health seeking behavior in the urban areas.

The number of minutes walk to the private clinic was not significantly correlated with the action taken in both the rural and urban areas. Most (80%), of the respondents in the rural areas tended to reside far from the private clinic. In the urban areas, those who resided near the private clinic tended to consult the traditional healer, medical personnel and spouse, friends and relatives. Those who lived far from the private clinic tended not to take any action.

The availability of health providers tended not to have any effect on the action taken in both rural and urban areas. In the rural areas, the community based health workers, like the BHW and the midwife, were usually available.

When the action taken and interpersonal influence were correlated, the relationship was not significant in the rural areas. In the urban areas, the relationship between interpersonal influence and the action taken was significant. Respondents tended to consult with spouses. Those who self-medicated tended not to consult with anyone (37.5%) or consulted their spouse (37.5%). Those who consulted the traditional healer (41.2%) andlay persons like, friends and relatives (52.8%) tended to consult also their spouse. Those who sought the help of medical personnel tended not to consult any lay person.