Trans. Inst. Indian Geographers
Vol. 7, No. 1, January 1985

SIDDHA SYSTEM OF HEALTH CARE – A PROFILE OF USERS IN MADRAS, INDIA

B. Hyma, Canada
A. Ramesh, Madras

ABSTRACT : Siddha system of medicine indigenous to South India acts as a complementary service to other health care systems (Ayurveda, Unani, Homeopathy and modern medicine) found in urban and rural areas of the state of Tamil Nadu. This research investigated the current pattern of utilization of Siddha medicine in providing basic health care in the City of Madras at intra-urban levels. A questionnaire survey of a sample of 500 out-patients attending 10 major Siddha clinics cum dispensaries in the city was conducted. Three major categories of clinics were identified – Madras City Corporation (3 surveyed), state government (3) and private (4). Four areas were investigated related to clinic utilization pattern and consumer behavioural characteristics: (1) Utilization behaviour of patients; the reasons for participation in present Siddha treatment or choice of therapy; (3) behavioural satisfaction, attitude and opinion dimensions in utilization; (4) socio-economic characteristics of the users.

A brief review of the literature of the concepts of patient utilization of health services is first presented followed by descriptions of methods of data collection, information, recording and procedures. A discussion of some aspects of the organizational and structural features of Siddha health services in context of which utilization behaviour occurs is given.

Some of the findings are: political and economic settings largely determine the organizational and locational aspects of public clinics; these are found to be confined mainly to heavily populated, old residential low income areas of the city; the majority of the population came from within a range of 3 kms, and from low income sections with a predominance in 20–35 and 35–50 age groups. Major attractive forces in the choice of Siddha treatment were found to be: low cost treatment, expectations of long term cure, nature of illnesses and diseases, belief in the system, previous knowledge and experience, effectiveness of treatment, familiarity, social contacts, its simplicity and ease of access. Facilities and service styles are found more suited to indigenous health care seekers' backgrounds. Overall patient's attitude towards Siddha services showed a general satisfaction. With government support the Siddha health services are being expanded. However, lack of maintenance of health records limits research to

assess the efficiency and effectiveness of practice related to treatment, disease, specific process criteria in various clinics.

This survey confirms the current pattern in many developing countries, where integration of modern and indigenous system of medicine occurs as a result of duality of people's practice to seek both systems. This seems to be mainly based on their perception of the effectiveness of treatment and the nature of illnesses and diseases. The complimentary function of Siddha treatment of certain dominant diseases was, however, difficult to evaluate, which may help explain dual reliance on the system.

As far as people's interests are concerned, it can be said that the greater the range of possibilities of alternative methods of medical care and the more equivalent their accessibility and with freedom to choose, the consumer might make judgement on the basis of factors already indicated by this survey.

INTRODUCTION

There are a number of well-developed and well-recognized indigenous systems of health care in various parts of the world. Both in China and India the cultural and scientific tools of their indigenous medicine have been given official recognition and are receiving government support. After independence in India, a revival and strengthening of indigenous Indian systems of medicine was promised and plans have been implemented for this purpose (1). In India two parallel systems of medicine, modern (allopathy and homeopathy), and Indian indigenous medicine (Ayurveda, Siddha and Unani) exist. Various government health care programmes at the centre, state and local levels in recent years are asserting their role as providers of primary care in both modern and indigenous systems of medicine in rural and urban areas. Siddha system of medicine (Appendix 1) is indigenous to South India, especially to Tamil cultural heritage and history (2). It is extensively used in the state of Tamil Nadu and it operates in both the rural and urban areas of the state as a complimentary service to other health care systems. Since 1970, the Siddha system of medicine has received attention and support from the central, state and local governmnents in Tamil Nadu (3). It can, however, be pointed out that the best of Siddha medical knowledge was already preserved during the 19th century. The services of the individuals and private institutions towards spreading the utility of this system are well-known in Tamil history (4). The social history of Siddha medicine indicates that patronage was received from the princes, rajas (kings), zamindars (large land owners), merchants, Hindu missions, trustees of Hindu temples, charitable institutions etc. during the 18th and the 19th centuries. Official recognition and encouragement to indigenous medical systems in Madras Presidency (British) was given in 1924 with the establishment of Indian School of Medicine.

The development of Siddha system is fully under the control of the state government through the government-sponsored councils, committees and teaching cum research institutions (5). The future role of Siddha in primary health care can be assessed

---

This paper was presented at the International Geographical Union (IGU), symposium on Health in the Tropics; Geographical Perspectives, University of Zambia, Lusaka, April 20–23, 1984.

on the basis of current programmes to promote the utilization of this system. The state government is expanding the Siddha clinics at primary health center levels in both rural and urban areas (6). It is apparent that the contemporary growth of Siddha institutions, research centers, and dispensaries (clinics) as they are given official recognition by the Indian central and state governments may strengthen the continued existence of this system of medicine. A Siddha Science Development Committee of the Government is playing an active role in promoting the use of Siddha medicine (7).

In view of the recent WHO's goals of achieving "Health Care for All by the Year 2000" this study investigates the current pattern of utilization of indigenous Tamil medicine (Siddha) in providing complementary health care in the city of Madras, Tamil Nadu, at intra-urban levels. Madras, like many other metropolitan cities in developing countries with phenomenal growth in population faces multidimensional problems related to health care delivery (B). Approximately 40% of the city's population live in slum and squatter settlements where the basic health and other needs are not fully satisfied or resolved. Complex variables like socio-economic/cultural and ethnic status of population have created different patterns of utilization and dimensions of demand for an effective health care delivery system (9). Madras is a major modern medical centre in South India as well as a center for indigenous Indian medical systems. Indigenous medical services, provided by both private and public facilities, have a substantial following among the city's population. A dualistic pattern of the utilization of medical services predominate in the city (10).

Even though a wide variety of therapeutics options are found available to the inhabitants of Madras, the study of the extent of utilization of various health services has not received much attention (11). Social and geographical research is particularly lacking in the area of indigenous medical systems of India at micro-levels (12). Even though the health system is viewed as an interface between providers (supply) and users (demand), little attention has been paid so far to the receiver end of the system: their utilization behaviour, the reasons for participation, satisfaction level, opinions and attitudes, willingness to give continued social support for the health services of their choice, measurement of effectiveness and efficiency of medical services, medicines etc. (13). In general, providers of the system, however, have been concentrating much of their efforts and resources on education, training, research and institution building, etc. while the consumer satisfaction seems to be taken for granted by the providers (14). Understanding issues related to consumer behaviour, quality of care provided, improving consumer-provider relationship, interaction, co-operation, and community participation in their health care programmes are far from being achieved in the Indian medical set up. This study therefore, concentrates on consumer behaviour as determinants of the use of existing Siddha health facilities in the city of Madras at intra-urban levels (15). Understanding the distribution of services, types of utilization, behaviour, perception, attitudes and socio-economic status of users as well as the political issues related to structure and organization of services are very useful for an effective planning and use of limited financial and manpower resources in the health care programmes (16).

RESEARCH DESIGN

This study of utilization pattern and behaviour of consumers of Siddha system of medicine in a metropolitan city like Madras hopes to provide a fairly comprehensive picture of the usefulness of this system for basic health care needs. In order to observe this process, this research investigation undertook a sample survey of ten Siddha clinics at different parts of the city. A purposive sampling technique was used on the basis of the concentration of clinics in the city (Fig. 1). Three major categories of clinics were selected (Madras City Corporation – 3 clinics, Tamil Nadu State Government – 3 and private clinics – 4) for a questionnaire survey of patients attending the clinics to study utilization pattern as well as to ascertain if differences exist in their utilization. A sample size of 50 patients was selected for interviews for each of the ten clinics to facilitate comparison between the three categories and also to help evaluate the validity of responses.

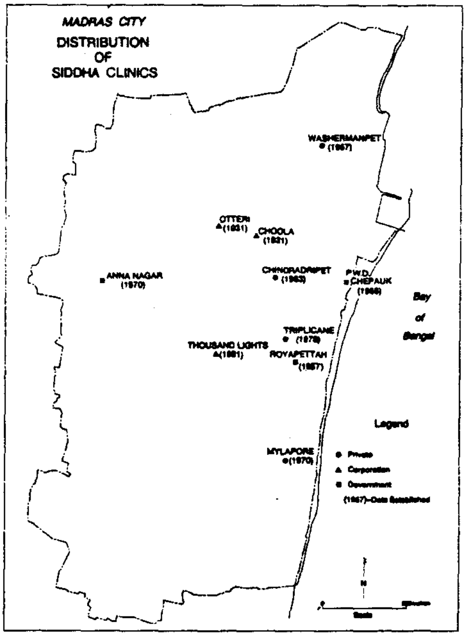

Fig. 1

Four major areas were investigated related to clinic utilization pattern and consumer behavioural characteristics : (1) utilization behaviour of patients attending Siddha health clinics; (2) the reasons for participation in present Siddha treatment or choice of Siddha therapy; (3) behavioural satisfaction, attitude and opinion dimensions is utilization; (4) socio-economic characteristics of the users.

Variables selected for the investigation were based on the following literature cited and modified to suit the local physical, socio-cultural, economic and political set-up.

It is at this juncture, we would like to present a broad review of literature related to the concepts of patient utilization of health services and some of the basic assumptions on which our field investigation and questionnaire survey were based. Behaviour model of utilization of health care services have been developed by many writers (17). Most of them are concerned with the reasons for differential use of medical systems by isolating variables which explain a decision to choose a particular service. McKinley reviewed literature on several approaches on utilization of health services: (1) the economic approach; (2) the socio-demographic approach; (3) the geographic approach; (4) the social-psychological approach; (5) the socio-cultural approach; (6) the organization or "Delivery System" approach (18). Geographers are interested in spatial patterns and the extent of utilization of various therapies offered as well as the reasons for choosing them (19). There is, however, a dearth of literature from developing countries.

A decision to choose a given health system is generally found to be dependent on many variables or based on multiple influence of availability, access to health care, nature of illnesses and diseases, cultural, social and psychological characteristics of consumers, knowledge about health care, their beliefs, attitudes, perception, physical and financial barriers, cost of care, effectiveness of treatment, quality of care and influences on the decision-making individuals by their social networks (20). According to many writers the choice of therapy in many developing countries is based on the nature of illnesses and diseases (21). Spiegel and Backhaut state that acceptability, accessibility, availability, continuity and cost of care are all linked and related in usage. For example, "Access has geographic, financial, social, ethnic and psychic component and is thus very difficult to define and measure operationally" (22). It is also pointed out that access for example may be made easy and influenced by free services through government programmes. Geographic proximity of services, and a reasonable travelling time and distance from a source is included as an important determinant of utilization behaviour (23).

Obtaining information on consumer acceptance or satisfaction with health care is important as it provides insight into realities of health care system and continued support for a particular service (24). Satisfaction behaviour is commonly measured by asking questions such as how satisfactory are the desirable effects of medicine and treatment, and absence of undesirable effects; how satisfactory is the performance of activities by the providers of care (it also includes physicians' performance, confidence and trust in doctors personal qualities, waiting time, access time, appointments, positive responses to treatment given, etc.); how satisfactory are the compliance and the utilization of services by recipients of care; how satisfactory are facilities and settings (25). Satisfaction may be an important factor in the choice of therapy, though effectiveness of treatment may supersede it (26). Many writers stress the importance of socio-psychological characteristics to measure and explain the user's satisfaction behaviour. Lasker, in her study on the Ivory Coast, observed that some of the most frequently cited major complaints against western medical care were based on long waits and delays, high and unexpected costs of treatment, and behaviour of medical personnel (also related to their indifference, unsatisfaction, unfriendliness, reluctance to explain or answer questions. Indigenous medical practitioners are often said to exhibit lesser social distance and more openness to patients when compared with modern health personnel (27). The measurement of satisfaction also requires a survey of attitudes and opinions towards health services (28).

Finally, the socio-economic characteristics (such as occupation, education, income) of the patients were obtained with an attempt to find whether any relationship exists on the basis of therapy utilized for reported illnesses in relation to socio-economic status of the users. Selection of variables to assess utilization of health services is thus based on conceptualizing them first. Selection, definition and scale of measurement of individual variables are discussed under questionnaire analysis.

METHODS OF DATA COLLECTION, INFORMATION, RECORDING AND PROCESSING

Most utilization data are generally derived from one of the following three principal sources: physician's record, hospital/clinic or insurance records and direct personal interviews or questionnaires in social surveys (29). We found that in most of the clinics, records which would provide a chronological account of the patient's visit, their purposes, illnesses and diseases, diagnosis, therapy and treatment recommendations were not maintained in a systematic fashion. Some data and records were not available to the researcher as they were used only for administrative and planning purposes A social survey was conducted in each of the settings by interviewing fifty patients over a period of 2–5 days per week in a clinic. Purposive selection was used (30) whereby the general composition of the sample in terms of sex and age is decided in advance. However, it was not possible to strictly confirm to definite numbers in composition because of the fluctuating nature of attendance especially in private and corporation clinics. Except for the indigenous medicine Anna hospital, the state government/workspot clinics were dominated by male staff working in the premises. Thus, it is not possible to say whether the sample size is representative of the population at large. However, a pilot survey indicated different categories of population attending various clinics in different composition of age and sex. The ten clinics were surveyed over a period of three months from February to April 1983. A total of 500 patient visits were covered. Rates of responses were only fair in all the clinics. A total of 34 major questions with numerous sub-divisions were asked. Both open-ended and closed questions were asked of the patients.

As there is no known previous work in this area of study, the survey is intended to be of descriptive in nature, i.e., an exploratory study designed to increase the investigators' knowledge with the reality of the situation they wish to examine further. Even though a pilot survey was conducted six months prior to the survey in four different clinics other than those selected, it was not possible to arrive at firm conclusions regarding certain variables used as the responses from users of the clinics seem to be too compliant and passive to many variables tested. We consider this study as only a first step to formulate a guideline for more precisive investigation to develop hypotheses to clarify concepts and to identify indices of value on utilization behaviour of health services in a developing country situation. This survey also gives information concerning the situation at a given time. It did not allow for seasonal variations in health if any exist. Considering the above limitations in processing the information and data, no model is applied. The basic data is studied and interpreted from simple frequency distributions. Simple percentages were calculated in terms of responses given to each variable. Separate tables were prepared for selected variables in each of the ten clinics as well as totals for three major categories of clinics, and grand totals were recorded to facilitate comparison-Cross-tabulations or associations between variables were not attempted because of the sample size, type of responses, and other limitations discussed above. Many compromises have to be made with the reality of the situation, the level of sophistication and responses of the patients interviewed. Findings and responses were not fully satisfactory. Yet a broad utilization pattern was discernible.

THE LOCATION/ORGANIZATION AND STRUCTURAL FEATURES OF SIDDHA CLINICS

It is necessary here to present a description of some aspects of the organizational and structural features of Siddha health services in context of which utilization behaviour occurs (31).

Location and Service Characteristics of Siddha Health-care Facilities

It can be said that political and economic settings largely determine the locational and organizational aspects of public clinics. For example, out of the four state government-run clinics, two are dictated by work-spot convenience for government office workers and are located within the office complexes. The other two are confined mainly to heavily populated old residential low to low-middle income neighbourhoods. Corporation and private clinics are also concentrated in the older residential areas. However, the much more numerous private clinics are dispersed over many parts of the city (32). Thus, there are noticeable inequalities in the location of public health care facilities of Siddha medicine. So far cultural settings largely determine the organizational form of health care delivery, especially in the case of corporation and private clinics located in convenient old congested residential areas of demand. In developing societies, it can be said that bureaucratic organizational factors influence the behaviour of professionals and the nature of the patient's contact with the health care delivery system (33). Government programmes however, reduce the economic barriers to access of indigenous health care services. Pinch observed that "Some inequality inevitably results from discrete location of facilities amongst spatially continuous (although) uneven populations" (34). The crucial question to ask of planned or established facility location patterns, is, therefore, how much inequality is produced or which groups are most disadvantaged? (35) It is noticed that in many Third World cities, location of public clinics are often as a result of government policies, not to satisfy the real needs of population, but to encourage the development of needs. Some writers see the locational decision of public facilities as a result of political process rather than geographic entity in many instances. This refutes the concept of equity criteria in spatial distribution of resources in relation to spatial distribution of social groups/population, etc. (36) It is true that a wide range of type of health facilities are available to the public. Given such varied organizational structures, there are wide differences in the utilization patterns and inequalities in the distribution. To understand the nature of functioning of indigenous medical clinics, there is a need to consider the role played by both private and public sectors. Geographic proximity of services, as influencing utilization behaviour is further discussed later in this paper.

Except for the state government indigenous medicine hospital, (37) which is a separate complex in a newly developed residential area, all other clinics (both the state government annexes and the city corporation) are located in concrete buildings in heavily populated areas. Invariably, these clinics are surrounded by shops or low/medium class residential houses. The same pattern holds good for private clinics (38). It is clear that there is absolutely no scope for any further expansion or rooms for the benefit of increased patients unless adjoining premises are acquired for the purpose. Expansion, however, depends on increased rates of use. The service facilities (diagnostic techniques and equipment, telephone, fan, toilet, wash basin) in most of the clinics are limited. Facilities at the government clinics are a shade higher than the city corporation or private clinics.

The city corporation and private clinics studied were established in different years (Figure 1). The private clinics studied have been in operation since the sixties while the government clinics are of more recent origin (the mid-seventies). The city corporation and private clinics were established in different years (Figure 1). All the doctors in the government and corporation clinics are graduates of BIM (Bachelor or Indian Medicine) obtained between 1970 and 1974 from the government Siddha College (39). Except for the large Indigenous medicine Anna Hospital which employs more than eight Siddha doctors, the corporation and overnment clinics have one doctor with a BIM degree and in some cases assisted by a male or a female nursing assistant and a pharmacist. Private clinics do not have any assistants.

The state government clinics have a daily attendance averaging between 60 and 80 patients. However, in Anna hospital 350 to 450 out-patients are seen per day (These figures are only estimates as given by the Siddha doctors). The average daily attendance in corporation clinics ranges between 60 and 100. It was not possible to estimate attendance in private clinics. A variation from 5 to 25 per day was noticed. The hospital clinic is limited to only three hours in the mornings in spite of a heavy demand for its services as seen by overcrowding. The rest of the clinics surveyed operate for about three hours in the mornings and three hours in the late afternoons.

None of the clinics were able to furnish complete data on diseases, time taken to treat them, nor approximate number of cases treated. The most commonly treated diseases as stated by the doctors in the clinics are: arthritis and "vadha" (muscular-joint pains) which have been given primary importance followed by asthma, skin diseases, stomach disorders, coughs and cold, general disorders and fevers, ulcers, and eye, ear and dental disorders. Other cases like piles, diabetes, urinary inflammations, jaundice, intestinal worms, and hydrocele and anaemia are also given treatment. Some clinics, however, seem to be well reputed for treatment of a particular disorder. A comparison

TABLE 1 : USE OF INDIGENOUS MEDICINE OF SIDDHA CLINIC PATIENTS

	Corporation N=150	%	Government N=150	%	Private N=200	%	Total N=500	%
Use of indigenous medicine with modern medicine	76	50.6	47	31.3	119	59.5	242	48.4
Use indigenous medicine only	74	49.3	103	68.6	81	40.5	258	51.6
Use IM for specific illnesses	73	48.7	67	44.7	76	38.0	216	43.2

of clinics revealed that skin diseases are the most commonly treated followed by "vadha" and digestive disorders.

THE QUESTIONNAIRE ANALYSIS

1. Utilization Characteristics

Choice of therapy between various health care systems:

Our investigation reveals that there is a dichotomous tendency in the medical habits of those who seek indigenous (Siddha) medicine (Table 1). About half of all patients in the Siddha clinics surveyed use both indigenous Siddha medicine (SM) and modern medicine as and when required. However, in the government clinics, only 31.3% of the patients use SM with modern medicine. One of the important reasons given by the patients, who use both systems, is that they use modern medicine only for some illnesses and emergencies. Patients who attend corporation dispensaries stated that often for quicker relief, they use modern medicine. A third of the patients in corporation clinics felt that there are some better treatments available through modern medicine. Siddha medicine, however, is preferred for long-term chronic treatments.

Regular use of medical care by order of priority:

Those who use Siddha and modern medicine seem to give priority to Siddha medicine first and only 22% chose Siddha as secondary to modern medicine for regular use. Very few use Siddha with other types of indigenous medicine except a very small per cent (below one) who use Ayurveda as a first priority with Siddha as a second. The priority given to other types of health care such as Unani and homeopathy is negligible.

Use of SM for specific purpose or general purpose:

In general, more than 45% of patients in all the clinics seek SM for specific illnesses. But the bulk of them in corporation, government, and private clinics also use SM for all purposes indicating its importance in basic health care (Table 1).

The above observations confirm the notion that where there are two (modern and indigenous) alternative approaches to the treatment of sickness is available, people often exhibit a willingness to take what each has to offer (40).

Use of Siddha by other Members of the family:

A high percentage of patients in corporation and private clinics also said that SM is used by other members of their family.

Change of Clinics:

Overall only 19% of the patients attending the clinics said that they changed

TABLE 2 : TREATMENT : TEN LEADING ILLNESSES OF SIDDHA CLINIC PATIENTS

	Corporation		Government		Private		Total	
	N=150	%	N=150	%	N=200	%	N=500	%
Rheumatism/arthritis	25	16.6	51	34.0	28	14.0	104	20.8
Skin diseases	28	18.6	29	19.3	37	15.5	88	17.6
Digestive disorders	38	25.3	9	6.0	4	2.0	51	10.2
Vadha	13	8.6	21	14.0	14	7.0	49	9.8
Higher fever	47	31.3	-	-	1	0.5	48	9.6
Asthma	9	6.0	8	5.3	31	15.5	48	9.6
Colds, coughs	44	29.3	15	10.0	3	1.5	47	9.4
Ulcers	8	5.3	15	10.0	10	5.0	33	6.6
Bronchitis/respiratory	11	7.3	9	6.0	11	5.5	31	6.2
Piles	5	3.3	8	5.3	13	6.5	26	5.2

clinics from modern to Siddha during their course of illness. The responses were 30% and 25% in corporation and government respectively. The responses to those interviewed in private clinics were very poor. Ineffectiveness of treatment is cited as the major reason for changing clinics. More than 69% of the patients did not respond to this recall question.

Length of period of usage of SM:

The patients (63%) who attend corporation Siddha clinics have been using them for more than two years. In the government clinics and hospitals more than 50% of the patients have been using SM for the past one year. In the case of private clinics usage varies between one or two years (56%); and 24% for more than two years. New seekers of this medicine seem to go mainly to the indigenous medicine hospital and private clinics. However, respondents did not state clearly their illness duration. For example: many who use SM for more than two years have used it for various disease conditions.

Corporation clinics patients (44%) use the facilities as and when required. Many interviewed said they (60%) now obtain weekly treatment in corporation and government clinics. Monthly utilization pattern is limited to private clinics (67% used once a month), , indicating their use for chronic type of ailments. It was observed that the reason for weekly treatment in corporation and government clinics is to some extent based on the practice of giving medicine for only a week.

Diseases treated

Patients listed 22 diseases for which treatment is sought in all the clinics. Skin diseases dominate (Table 2) showing more or less the same percentage (15%–19%) in all the three groups of clinics. Rheumatism, arthritis, vadha and asthma, fever, cold and coughs, appear in the next order of importance in all the clinics having more or less the same per cent (10%) seeking relief for these ailments. Other diseases mentioned were high blood pressure, bronchitis, migraine ulcers, tonsilitis, hydrocel/urinary, dental, diabetes, constipation, menstrual disorders, nervousness, piles, etc.

Clinical groups show different patterns:

In corporation clinics fevers ranked first (31.3%) followed by cold and coughs

TABLE 3 : DISTANCE TRAVELLED BY SIDDHA CLINIC PATIENTS

	Corporation N=150	%	Government N=150	%	Private N=200	%	Total N=500	%
Less than 1 Km.	123	82.0	36	24.0	45	22.5	204	40.8
1 – 3 Km.	21	14.0	20	13.3	56	28.0	97	19.5
3 – 5 Km.	5	3.3	12	8.0	40	20.0	57	11.4
5 – 10 Km.	1	0.7	14	9.3	30	15.0	45	9.0
Greater than 10 Km.	-	-	66	44.0	27	13.5	93	18.6
No response	-	-	2	1.3	2	1.0	4	0.8

(29.3%), digestive disorders (25.3%), and skin diseases (18.7%). In government clinics rheumatism patients ranked first (34%) followed by skin diseases (19.3%), vadha (14%), and cold/coughs and ulcers (10% each). In private clinics, skin disease treatment ranked first (15.5%) followed by asthma (15%) and rheumatism (15%). Private clinics provide specialized treatment. Patients generally use Siddha clinics for treatment for common ailments. Certain illnesses of chronic nature, rheumatism, arthritis, asthma, eczema, diabetes, blood pressure, leucoderma and cancer also receive attention.

In the government and corporation clinics, pattern of diseases treated appears similar. An analysis of list of diseases indicates that the strength of SM lies in providing relief for a large number of people for illnesses of both minor and chronic nature.

Geographic proximity and travel patterns:

Geographic area – Corporation clinics draw patients from only within the city. The hospital attracts about 24% from outside the city with the bulk of them coming from the immediate areas. Private clinics draw 95% of their patients from within the city.

Distance travelled – The great majority of patients (82%) who visit corporation clinics travel less than 1 km. (Table 3). Only 14% travel 1 km to 3 kms. Whereas in all government clinics, 44% travel for more than 10 kms; 24% for less than 1 km.; and 13% travel between 1–3 kms. The highest figure in the above category is in Anna hospital with 80% of the patients travelling more than 10 kms. Overall, 70% travelled less than 3 kms. and 41% less than 1 km. to reach their clinics of choice, indicating most seek the nearest place for Siddha medicine. Private clinics seem to attract people from greater distances than corporation clinics. However, the responses were only fair in this question.

Time taken to reach the clinics:

We find 74.6% of the patients who attend corporation clinics, take nearly 10 minutes to reach the clinics. In the case of state government hospital and clinics, 30% take more than one hour; 20% spend 10–20 minutes. Time taken to reach the clinics largely depends on the modes of travel used.

Mode of travel – Nearly 92% of patients said they walked to the corporation clinics; 2% used bicycles; 6% used the bus. In the case of government facilities, 70% used the bus; 6 to 8% used bicycles. The rest used other modes such as rickshaw, train, etc. Only in private clinics did the patients come by car (18% Mylapore); more than 70% came to private clinics by bus. People who visited the hospital used two (46%) or three modes (8%) of travel. 25% used two modes of travel to reach private clinics.

TABLE 4 : REASONS FOR CHOOSING SIDHA MEDICINE BY SIDHA CLINIC PATIENTS (1)

	Corporation N=150	%	Government N=150	%	Private N=200	%	Total N=500	%
Cost	52	34.6	30	20.0	1	0.5	82	16.4
Belief	4	2.6	-	-	2	1.0	6	1.4
Family	4	2.6	1	0.7	5	2.5	10	2.0
Better treatment	132	88.0	125	83.3	196	98.0	453	90.6
No side effects	91	60.6	105	70.0	171	95.5	367	73.4

(1) More than one response was given.

However, in all the above three travel pattern variables used, the responses were not clearly stated by the patients. Hence, it was not possible to develop a correlation between "geographical distance" and "travelling time". The inability of patients to express approximate distance travelled and the modes of travel used was noticed. This variable can however, be cross-tabulated with the question of "where do you reside?" However, many of the patients were reluctant to give their address or state clearly their place of residence.

Reasons for Choosing Siddha Medicine

Choice of the medicine and clinic:

Since the corporation and government facilities offer free services, the choice of therapy must also be due to factors other than the direct service cost. Even though a kind of traditional belief acts as a selective principle to help determine the type of care chosen, better treatment (expectations) appears to be the motivational force in choosing this therapy. Belief factor did not score high as it seems taken for granted. It seems as if most of the users avail themselves of SM and consider it a body of traditionally sanctioned, accepted and recognized practice with ready-made proven formulae and remedies. It is not clear whether they are aware or concerned with the rational bases for the indigenous system's validity (Table 4)

The bulk (88 to 98%) of the patients felt that they get better treatment with SM than modern medicine. Also, 60 to 85% said that there are no side-effects of the Siddha medicine (Table 4) About 30% in the corporation and government clinics said that they selected SM because it is cost-free. In choice of a particular clinic, 65% said nearness of the clinic influenced them.

Influence of social networks in choice:

Overall, the choice of Siddha treatment is mainly due to one's own decision (32%) or neighbour's influence (32%). This is followed by an influence of a friend (25.6%) or a relative (22.8%). In the case private clinics 50% said their neighbour's influence was important, while 44% in corporation indicated 'own decisions' as the reason, this probably reflecting their faith in Siddha medicine.

Satisfaction Levels

Certain indirect measures of satisfaction may be related to cost, waiting period, distance travelled, behaviour of medical personnel, medical procurement and service facilities (41).

Services

Nearly a 100% satisfaction was indicated in all the clinics to a question – "are you satisfied with the Siddha medicine and services?" Compliance is indicated. Doctor's attitude is reported by 80% as friendly in all the clinics. In the government hospital the figure is only 64.6%. Nearly 50% of the patients in government and corporation clinics felt that their doctors are understanding and explain questions clearly; only 20% is noted for the private clinics. However, the responses were not complete.

Waiting period:

Overall 35% said they have to wait for an average of 10 minutes to be seen by the doctor, with 23% saying 10–20 minutes and 20% for more than an hour. In corporation clinics, the period of waiting seems less, with 75% saying about 10 minutes; in government facilities, 20% wait for 10–20 minutes as against another 23% for 20–60 minutes. In the private clinics, at least a third wait for 10–20 minutes, with 18% for 20–30 minutes. A high per cent (36%) of the patients in the hospital said they wait for more than an hour to see the doctor. Long waiting can be indicative of crowding or limited clinical hours, as in the case of the hospital to just the practitioner giving more attention to the patients as in the case of less crowded private clinics.

Cost of treatment:

Generally, the treatment and medicine is free in all corporation and government facilities. About a third of the state government clinics' patients felt that there would be better treatment if a nominal fee had to be paid. People visiting private clinics are charged a fee according to their income levels.

Other reasons:

Other reasons cited by the patients for difficulties in using indigenous and modern medicine are the long waits in certain Siddha and modern clinics. About 34% felt that costs of buying modern medicine were too high. Communication problems with the modern doctor were cited by 22% in corporation clinics. About 66% interviewed in private, and 90% in state government clinics stated that they found the service somewhat indifferent and impersonal in modern medical facilities as compared to Siddha clinics.

Overall patients' attitude towards services shows a general satisfaction with the quality of care. Even though the majority said that they were satisfied with Siddha medicine, they seem unclear about the causes of illnesses and the effectiveness of medicine given to them, as well as not being able to clearly evaluate their choice and needs. Their evaluations seem to be fixed upon expected effects. It confirms the view that the functional scope of each system is largely determined by its ability to get results in specific cases of illnesses (42). Though it is recognized that user's satisfaction may be an important factor in explaining the choice of therapy, effectiveness of treatment may supercede it (43). The patient may not provide honest answers (44). Influence of clinical environment in biasing the responses has to be considered. Patients may not want to be critical before they are treated or on their initial visit. On the other hand, chronic patients and those receiving long term care may generally indicate their total acceptance of the system. In one private clinic (Mylapore) our observation indicated that it is mainly the personality of the practitioner which kept them to continue the therapy.

Our personal field observations of the process of health care in some of the clinics indicate that the poorer class receive less personalized treatment especially in government and corporation clinics. Doctor-patient relationship is unstable. Attitude of doctors in government services is impersonal. However, it was reported that some of them do see their patients in their private practice, and thus develop a supply of steady customers for their private practice. In the government hospital and the clinics, a high turnover of doctors and lack of a long-term personnel implies lack of opportunities to develop personal relationships as well as study the effectiveness of a particular treatment or disease. Doctors' role is authoriarian, active and tells the passive patients what to do. They do not help the patient in preventive aspects of care or health. No health education is received or planned for. Therapy seems to be based on mainly prescribing drugs though the private practitioners to some extent emphasize the dietary regulations as prescribed by the principles of Siddha medicine.

It is also pointed out by Abramson that "if patients or public are satisfied with their health care, this does not necessarily mean that their care is of high quality" (45). It was observed that many facilities and settings of both public and private clinics exhibit somewhat substandard quality in terms of equipments, diagnostic facilities, availability of medicines, etc. A review of process of care is as important as cure component (46). Setting structure evaluations is a necessity in such instances. Of course quality of care evaluation may differ in value in different categories of patients according to prevalent illnesses or population group in a cultural/ socio-economic context.

Attitudes and opinions towards Siddha health care services:

A measurement of satisfaction requires a survey of attitudes and opinions. Most patients interviewed do not know or did not want to express any strong opinions or valid suggestions to certain open-ended questions such as those related to satisfaction of medicine, physician's performance, services, facilities and settings, government support for Siddha, suggestions for improvements, etc. However, a summary of few frequent type of responses by some of the patients is furnished below:

1. Siddha medicine has no side effects. It gives permanent relief. But, diet restriction is a problem. It suits all ages well. It takes time to cure illnesses. Modern medicine brings only short-term and quick relief. Yet most patients seem to prefer to use both modern and Siddha medicine. Those who seem to be concerned with expectations of a long term cure than immediate relief of symptoms, prefer to go to a Siddha clinic.

2. Concerns related to regular supplies of medicine were expressed by many. Shortage of medicines are often felt. Medicines should be given for more than one week so that frequent time-consuming visits to the hospital can be avoided. Inadequate medical supplies (situation) prevent large numbers of patients from attending the clinics. Medicines should be given in capsule or tablet forms. Current packing in papers are not satisfactory in the city's hot and humid environment. Most indigenous medicines taste bitter making it difficult to administer especially to children. Better research is needed. Siddha medicine should be made cheaper in private clinics.

3. Dissatisfaction with frequent change of doctors in government and corporation clinics was expressed. Most prefer to be treated by the same doctor so they do not have to repeat their case history, etc. Many would like to see more government support for Siddha medicine as well as opening up of more clinics/hospitals at convenient locations in the city. Clinic hours should be lengthened. More doctors should be appointed and the practice of doctors' transfers should be eliminated.

Socio-Economic Characteristics of the Users:

TABLE 5 : SELECTED DEMOGRAPHIC AND SOCIAL CHARACTERISTICS OF SIDDHA CLINIC PATIENTS

	Corporation		Government		Private		Total	
	N=150	%	N=150	%	N=200	%	N=500	%
Sex								
Male	75	50.0	94	62.7	114	57.0	283	56.5
Female	75	50.0	56	37.3	86	43.0	217	43.5
Education								
Illiterate	27	18.0	24	16.0	1	0.5	52	10.5
Primary	58	38.6	38	25.3	39	18.5	135	27.0
High school	60	40.0	62	41.3	122	61.0	244	48.8
College/technical	2	1.3	25	16.7	36	18.1	63	12.6
Not stated	3	2.0	1	0.7	2	1.0	6	1.2

Sex, Age and Place of Birth:

In corporation clinics, an almost equal number of male and female respondents were found. In government clinics, males (62%) dominated in attendance. A more balanced sex ratio was seen in the private clinics (Table 5).

The predominant age groups of patients (i.e. more than 50%), seem to be around 20–35, followed by 35–50 in all the clinics (Table 5). The majority of the patients said that they were born in Madras City.

Occupation

In corporation clinics 35% were housewives, followed by labourers (18.6%), students (6.6%), teachers (6%) and workers (6%). All other categories such as officials, farmers, drivers, businessmen, shopowners, tailors, retirees showed less than 2% each. Government clinics were dominated by government employees (36.6%) followed by housewives (22.6%) and labourers (10%). Private clinics were most frequented by housewives (38.5%) followed by business (17%), students (8%) and shop owners (7%).

Income:

Only a subjective analysis is possible. Very low and low income groups dominated the corporation and government clinics. However, middle income were also seen in the hospital and government clinics and in the workspot/government clinic. About 75% of the people visiting the private clinics said they are from the middle income group. The income statements given by the respondents were not too reliable.

Education:

The basic assumption would be formal education helps to diminish traditional medical beliefs in many ways. The college-educated (12% to 30%) attended mostly the private clinics. 40% of those attending corporation clinics had high school education and 38% had primary education. In corporation clinics, 10 to 25% were found to be illiterates and also about 15% to 25% of those attending the government clinics. It can also be said that Siddha is being propagated and promoted especially as part of the plans to revive and strengthen Tamil culture and heritage by the state government. Thus it seems to control the type of users by directing its welfare efforts towards very low and no-income Tamil-speaking urbanites who are commonly found in the heavily congested old residential neighbourhoods of the city and near industrial zones. More than 80% of those utilizing the facilities were Tamil speaking followed by a minority of (10–15%) Telugu-speaking population. Some 80% were Hindus.

Interpretations of some of the findings and drawbacks of the survey

This research undertook to investigate five areas of significance in utilization pattern and characteristics of users of selected Siddha clinical facilities in the city of Madras.

Some selected interpretations from the questionnaire analysis on utilization behaviour, the reasons for choice of therapy, satisfaction, attitudes and opinions of respondents and their socio-economic characteristics are presented below:

Utilization Patterns:

Integration of modern and indigenous medicine occurs as a result of duality of people's practice to seek both systems. As far as people's own interests are concerned, it can be considered as a question of choice and the freedom to choose and decide.

Other questions such as "Does SM complement modern medicine to evaluate. This is especially so in cases of treatment of diseases such as skin, rheumatoid arthritis, jaundice, asthma, eczema, etc. If this complementary of function can be identified, it may help explain dual reliance on traditional and modern health care system and develop an efficient health plan. The responses of patients as to when they chose modern medicine or SM for a particular illness or ailment and how effective their treatment and medicine are ambiguous and difficult to obtain in this survey. It was also difficult to identify patients with long-term and short-term care, chronic ailments, etc. though the length of period of use of SM was stated by some. What durations make a disease chronic – 3 months, 6 months or a year? Diagnostic procedures for identifying diseases were not clearly understood or explained to patients. Thus it was difficult to clearly date illness duration to various diseases listed. Many patients had difficulty explaining their illnesses. In most instances, they described symptoms of the disease. No clear cut lines could be established for terms like fever, vadha diseases, body pains, headaches, general weaknesses, skin diseases, etc.

According to the doctors, seasonal variations do occur in patient load and types of diseases treated. Peak incidence is the monsoon season (October–November). This area needs further exploration.

Recall questions concerning past events or experiences such as how many times you changed clinics, how effective your previous experience with this medicine, place of birth, and distance and mode and cost of travel were often not answered properly by many.

Some writers have considered geographical proximity of services as an important determinant of utilization behaviour (47). The distance travelled indicator also includes travel cost, time and mode of travel. The hospitals and neighbourhood corporation clinics and private exhibit somewhat different patterns of distance travelled to the site as shown in this investigation. Overall, a negative relationship between distance and utilization of health care is noted. In many instances, as distance travelled to clinics increases, the patients went to larger facilities such as the indigenous hospital in this study and travel much longer distances for using public hospitals

(48). The poor in many cases are obliged to undertake long, expensive and time-consuming trips to distant hospitals (49). This is al also true of the indigenous medical hospital in this study. While most small clinics such as the corporation and government clinics attract patients within a radius of one km., private clinics seem to attract patients from longer distances. Much more research work is needed to determine the precise effect and efficiency, if any, of geographical proximation in relation to utilization.

The reasons for choosing Siddha health care:

Major attractive forces in the choice of Siddha treatment were found to be: low cost or no cost treatment, effectiveness and expectations of long term cure, belief in the system, previous knowledge, familiarity experience, social contacts, its simplicity and ease of access; facilities and service styles more suited to indigenous health care seeker's background. Even though majority of users said better treatment was a major reason for choosing SM, it was not clear as to whether at the time of the interview, patients undergoing treatment see it from their own expectations of long term cure or from belief and confidence in the medicine or as a result of failure to obtain relief from modern medicine. Gould pointed out that patient accepts the choice of therapy to the degree that its use appears to yield favourable results, but has little conscious awareness of the empirical bases of either modern or indigenous system. "His evaluations are fixed upon effects" (50). Thus, the choice of therapy is often said to be based on the nature of illnesses and diseases and effectiveness of treatment as experienced by the user (51).

Patients' satisfaction, attitudes and opinions:

Satisfaction must be recognized as an indicator of continued social support for the type of medicine chosen. Patients' ability to understand several of the satisfaction questions asked were limited. Hence, they either didn't know or did not want to respond since they have already decided on a particular health care system. Thus, open-ended questions related to satisfaction and quality of care produced difficulties when it came to interpreting. Even though majority said that they are satisfied with their treatment, and their doctors and the facilities, but as it was pointed out earlier, this does not necessarily mean that their care is of high quality. Abramson points out that "satisfaction does, however, enhance the prospects of compliance and the proper utilization of services, and it is also an important additional end-result in its own right" (52).

Research is needed to develop better measure of patient's satisfaction and quality of health care provided. Health care programmes of government are not necessarily questioned or evaluated so far. Further evaluative studies are needed to test whether the performance of clinics has any significant beneficial effects on the community or population group it is directed to serve. For examp!`, the newly established Anna hospital with its better diagnostic, clinical and curative techniques as well as specialized, organized, standardized, impersonalized, services is able to give fuller and more adequate medical care than the smaller clinics (both private and public). The small corporation and private clinics seem to operate in isolation from the surroundings communities. However, neighbourhood public clinics can serve a community more effectively if a model of community health center linkages could be planned which emphasize promotive and preventive health care and not just curative work. Social workers and paramedics could form a vital link. This will also promote active participation of members in the community in the identification and solutions of their community health and environmental problems along with an integrated problem of poverty. A consumer headed board drawn from members of various neighbourhood associations to be represented in Siddha Science Development Committee in policy making is necessary.

On the part of the clinics, more incentives should be given to the indigenous doctors and their staff, and better training, and communication with patients should be improved. Regular record keeping of patients and diseases treated should be planned and enforced.

Other structural factors which affect the quality of care at neighbourhood type clinics (corporation, private and government annexes) are related to regular supply and availability of commonly used indigenous medicines, better diagnostic techniques and facilities for both short-term and long-term care and continuity of care for chronic ailments. In provision of basic health care, "A system of relationship is involved, and participating in the system are organized institutions as well as individual knowledge and attitudes" (53). Lack of maintenance of health records again limits research to assess the efficiency and effectiveness of practices related to treatment, disease, specific process criteria. Developing simple measures of the quality of providers need further research.

The measurement of satisfaction also requires a survey of attitudes and opinions which may give a better indication of evaluative dimension of quality of care and/or effectiveness. Few common responses were indicated: more Siddha clinics at convenient locations to reduce travel costs and time; concerns related to costs and regular supply of medicines and type of packages; extension of clinical hours; preference for the same doctors, not to be transferred, etc. These indicators still would not give as a clue as to how to measure the effectiveness of Siddha medicine, which in our opinion is the most difficult variable to measure without systematic record maintenance of individual case history as well as various types of diseases treated and medicines used in each clinic.

Socio-economic characteristics of users of Siddha clinical facilities:

Even though McDonald in his study stated that "In Indian set up, differential support for the two systems exist – modern medicine continues to enjoy the patronage provided by the dominant classes and their social values, and by the academic and political authorities", (54) and that indigenous medicine seems more dependent upon or works through social supports in the community. The lower income groups are more dependent upon indigenous medicine in spite of predominance of modern medicine (55). It is not clear in urban settings, how various income and occupational groups patronize various alternative types of health care. Though the results of this survey point out that the city corporation clinics mainly attract low income, working class population from both the modern and informal sectors of the city, private clinics present a different pattern. The latter seem to attract population of all categories and types. Of course caution must be exercised in generalizations about private clinics as our sample is too small compared to more than 650 registered practitioners of Siddha medicine of many grades and various degrees of sophistication in Madras (56). However, earlier study by these researchers confirms this pattern. On the other hand, the two government clinics (only one was surveyed in this research) with their work-spot conveniences provide a potential setting for use by office workers of various levels and income. Thus, special populations are encountered in state government work spot clinics. We can infer that the generalizations made from our sample size may not be completely correct or perfect at this stage. A disadvantage is thus encountered in this sample survey in that it is not really known whether there are differences between the persons chosen in each category of clinics and the total population. Many shortcomings have still to be overcome in a sample survey of this type.

This survey is mostly descriptive and explorative. To study the determinative process of why people utilize indigenous medicine needs further research, and refinement and testing in view of lack of previous work in utilization/behavioural research model. Formulating and testing hypotheses may further help to explain the patterns.

Integration of modern and indigenous system of medicine occurs as a result of duality of people's practice to seek both systems. As far as people's own interests are concerned, it can be considered a question of choice and the freedom to choose, decide and integrate both systems. This seems to be mainly based on their perception of the effectiveness of treatment. However, overall it can be asserted that the greater the range of possibilities of alternative methods of medical care and the more equivalent their accessibility, the more likely it is that consumers will make judgement on the health of their choice on the basis of factors such as proximity, cost, type of illnesses, social contacts, satisfaction of physical and psychological needs, etc. With government support, the Siddha health services are being expanded. Both modern and indigenous health services are largely within the reach of the city's population. More studies of this nature are however, needed to assess decision making process in choosing the forms of health care, the quality and effectiveness of care as well as how efficiently the scarce resources are being utilized, and the extent of social support given by the consumers to indigenous systems of medicine.

REFERENCES

1. Banerji, D. The place of indigenous and Western systems of medicine in the health services of India. Soc. Sci. Med. 15A, 101–114, 1981.

2. Narayanaswamy, V. Introduction to the Siddha System of Medicine. Pandit, S. S. Anandam Research Institute of Siddha medicine, Madras, India, 1975; Pillai, K. N. History of Siddha Medicine. Government of Tamil Nadu, Madras, 1979.

3. Director of Indian Medicine, Government of Tamil Nadu. Performance Budget 1982–83. Unpublished document, Madras, 1983. The Directorate of Indian medicine was established in 1970 in Tamil Nadu. The Directorate is responsible for the development of Indian systems of medicine, namely (1) Siddha, (2) Ayurveda, (3) Unani, (4) Naturopathy and (5) Yoga, under various programmes viz., teaching, training, research and implementation of schemes such as the preparation and production of medicines and regional pharmacies, setting up Siddha wings in government hospitals and primary health centres in the State, and medicinal farms.

4. Reddy, D. V. S. Medical relief in South India : Centers of medical aid and types of medical institutions. Bull. Hist. Med. India, 9, 385–400, 1941; Gurumurthy, S. Medical Science and dispensaries in ancient South India as gleaned from epigraphy. Indian J. of His. Med. 5, 1, 1976; Pillai, op. cit. (1), pp. 540–542.

5. Pillai, op. cit. (2), p. 561, 625.

6. The state government has started 15 Siddha wings attached to District headquarters hospitals, 71 Siddha wings attached to Taluk hospitals and 15 to non-taluk hospitals with bed facilities. Siddha wings in 210 Primary health centers has been approved, out of which 144 have started functioning. In addition to this, the Government runs 9 clinics since 1979–80. The local rural governing bodies, namely Panchayat Unions, run an estimated 330 Siddha clinics in the state. Director of

Indian medicine, op. cit. (3). Staff Reporter – Siddha doctor for every district. The Hindu, Madras, April 17, 1984.

7. A Siddha Science Development Committee was established by the Government in 1981. The work of the committee includes: recommendation for the establishment of government regional pharmacies for the production and supply of medicine; testing of the standards of the raw drugs purchased by the pharmacies; supervision of the work of copying down the rare manuscripts and texts and reprinting of the rare books; translation of eminent Siddha literature into English; publishing of Siddha encyclopedia, standard text books and reprinting from 500 Cudjon (palm) Leaves.

8. Sucharita, C. G. Spatial pattern of the distribution and utilization of health care services in selected areas of Madras city. Unpublished M. Phil. dissertation, Department of Geography, University of Madras, 1983.

9. Ibid, p. 33.

10. Hyma, B. and Ramesh, A. Traditional Indian medicine in practice in an Indian metropolitan city. Soc. Sci. Med. 15D, 69–81, 1981.

11. Ibid.

12. Hyma, B. and Ramesh, A. Traditional Indian medical systems as a field of study for medical geographers. Geographia Medica (Hungary), 11, 116–140, 1981. Two recent studies are, however, referred : Srivastava A. B. L. and Bhandari, S. C. Utilization and patterns of demand for the CGAS Ayurvedic dispensaries in Delhi. National Institute of Health and Family Welfare, Research Report No. 8, New Delhi, 1974; Kakar, D. N., Srinivasamurthy, S. K. and Parker, R. L. People perception of illness and their use of medical care services in Punjab. Indian J. of Med. Edu. 11, 286–298, 1972.

13. Kroeger, A. Anthropoligical and socio-medical health care research in developing countries. Soc. Sci. Med. 17, 147–161, 1983. Unschuld, P. U. Medico-cultural conflicts in Asian settings: an explanatory theory. Soc. Sci. Med. 9, 303–312, 1975; Elinson, J. and Siegman, A. Socio-Medical Health Indicators. Baywood, Farmingdale, New York, 1979.

14. Kime, R. E. Health : A Consumer Dilemma. Wadsworth Publishing Co., Belmont, California, 1970; Wadsworth M. E. J., Butterfield, W. J. H. and Blaney, R. Health and Sickness : The Choice of Treatment – Perception of Illness and Use of Services in an Urban Community. Tavistock, London, 1971.

15. The term 'Clinic' in this paper is used for convenience and is synonymous with the Indian term 'Dispensary' which is a place where diagnosis and treatment of outpatients are done, and medicines are dispersed. In Madras city, there is a total of four corporation Siddha clinics, one State Government Hospital and four state government clinics (dispensaries), and an estimated 650 registered private practitioners of Siddha medicine.

16. Giggs, J. A. Human Health problems in urban areas. In Social problems and the City (Edited by Herbert, D. T. and Smith, D. M.), ch. 6, p. 108. Oxford University Press, New York, 1979.

17. Fink, R. The measurement of health care utilization. In Conceptual issues in the Analysis of Medical Utilization Behaviour (Edited by Greenlick, M. R.), pp. 5–32. U. S. Department of Health, Education and Welfare, Washington, D. C., 1969; McKinley, J. B. Some approaches and problems in the study of the use of services. J. Hlth Soc. Behaviour 13, 115–152, 1972; Anderson, J. G. Health services utilizations : framework and review. Health Services Research, 8, 184–199, Fall 1973; Linn, L. S. Factors associated with patient evaluation of health care. Mill. Mem. F. Q. 53, 531–548, 1975; Robinson, David; Abramson, J. H., Survey Methods in Community Medicine. Churchill Livingstone, London 1979; Patients, Practitioners and Medical Care : Aspects of Medical Sociology. 2nd Edition. William Heinemann, London, 1978.

18. McKinley, J. B., op. cit. (17).

19. Giggs, J. A. op. cit. (9); Knox, P. I. The intra-urban ecology of primary medical care : patterns of accessibility and their policy implications. Env. and Planning. A10, 415–435, 1978; Phillips, D. R. Public attitudes to general practitioners services : a reflection of an inverse care law in urban primary medical care. Env. and planning. A11, 815–824, 1979.

20. Lasker, J. N. Choosing among therapies : Illness behaviour – the Ivory coast Soc. Sci. Me. 15A, 157–168, 1981; Squyers, W. D. (ed.). Patient's Education : An inquiry into the State of Art. Springer, New York, 1980; Spiegel, A. D. and Backhaut, B. H. Curing and Caring : A Review of the Factors Affecting the Quality and Acceptability of Health Care. Spectrum Publications, Inc., New York, 1980; Freidson, E. Patient's view of Medical Practice. Russell Sage Foundation, New York, 1976; Olsen, D. M., Kane, R.L. and Kasteller, J. Medical care as a commodity : an exploration of the shopping behaviour of patients. J. of Community Health, 2, 85–91, 1976; Zola, I. Pathways to the doctor : from person to patient. Soc. Sci. Med. 7, 697–698, 1973; Rosenstock, I. M. Why people use health services? Mill. Mem. F. Q. 54, Part 2, 94, 1966; Parsons, T. The Social Systems. Glencoe, I11. : The Free Press, 1951.

21. Srivastava, A. L. Socio-cultural responses to disease and treatment patterns. Studies in History of Medicine, New Delhi, 4, 183–189, 1980: Heggenhougen, H. K., The utilization of traditional medicine – A Malaysian example. Soc. Sci. Med. 14B, 39–44, 1980, Kakar, D. N. Folk and Modern Medicine : A North Indian Case Study. New Asian Publishers, Delhi, 1977. Lieben, R. W. Traditional medical beliefs and choice of practitioners in the Philippines. Soc. Sci. Med. 10, 289–296, 1976; Kakar, D. N., Srinivasamurthy, S. K. and Parker, R. L. People's perception of illness and their use of medical care services in Punjab. Indian, J. of Medical Education, 11, 286–298, 1972; Suchman, E. Social Patterns of illness and medical care. J. Hlth hum. Behavr. 6, 2–15, 1965; Wadsworth, M. E. J. et al., op. cit. (6); Madan, T. N. Who chooses modern medicine and why? Economic and Political Weekly, New Delhi, 13, September, – 1875–1884, – 164; Hartley, e. L. et al.

Determinants of health beliefs and behaviour. Am. J. Pub. Hlth. 51, 1541–54, 1961; Press I. Urban illness, physicians, cures and dual use in Bogota. J. Hlth. Soc. Behar. 10, 209–217, 1969; Gould, H. A. The Implications of technological change for folk and scientific medicine. American Anthropologist. 59, 507–516, 1957. Suzanne, C. Ho, Lun, K. C. and Ng, W. K. The role of Chinese traditional medical practice as a form of health care in Singapore 111. Conditions, illness behaviour and medical preferences of patients of institutional clinics. Soc. Sci. Med. 18, 745–752, 1984.

22. Spiegel, A. D. and Backhaut, B. H. Giving and Caring : A Review of the Factors Affecting the Quality and Acceptability of Health Care. Spectrum Publications, Inc., New York, 1980, p. 105.

23. Ibid., pp. 106–107; Giggs, op. cit. (16); McKinley, op. cit. (17); Brooks, C. H. Association among distance, patient satisfaction and utilization of two types of inner city clinics. Medical Care, 11, 373–383, 1973.

24. Spiegel and Backhaut, op. cit. (20), p. 175.

25. McKinley, op. cit. (17), p. 122; Abramson, op. cit. (17), p. 30

26. Gould, op. cit. (20), p. 510.

27. Lasker, op. cit. (20), pp. 159–162.

28. Abramson, op. cit. (17), p. 33.

29. McKinley, op. cit. (17), p. 116.

30. Abramson, op. cit. (17), p. 58.

31. Anderson, op. cit. (17), p. 192.

32. Hyma and Ramesh, op. cit. (10).

33. McDonald, C. Political economic structures – approaches to traditional and modern medical systems. Soc. Sci. Med. 15A, 101–108, 1981.

34. Pinch, S. Territorial justice in the City. In Social problems and the City (Edited by Herbert, D. T. and Smith, D. M.) op. cit. (16), ch. 3, 33–46.

35. Massam, B. Location and Space in Administration. Arnold, London, 1975; Pinch S Territorial justice in the city. In Social Problems and the City, op. cit. (8), pp. 201 – 205; Pahl, R. E. Social –political factors in resource allocation. In Social Problems and the City, op. cit, (8), Ch. 3, 33–46, McKinley, op. cit. (12), pp. 132 – 138; Anderson, op. cit. (12), pp. 189–193;

36. Pinch, op. cit. (34).

37. Arignar Anna Hospital of Indian Medicine (IM) in Madras city was established in 1970 with 100 beds. It has out-patient and in-patient units for the three systems of indigenous medicine (Siddha, Ayurveda and Unani). The hospital complex also includes three clinical research units for three systems of IM, a pharmacy for the preparation and production of IM. It supplies medicine and has supervisory function over the four state government clinics in the city; A pathology and a biochemistry laboratory and an X–Ray unit are being planned in its campus. A special Siddha department is created for skin diseases. The Central Siddha Research Institute in the campus conducts research on cancer, diabetes, jaundice etc.; it has an in-patient clinic.

38. Hyma and Ramesh, op. cit (10).

39. A teaching cum research college was established by the state government at a place, Palayamkottai in 1964. The capacity of the college is limited to an annual intake of 75 undergraduate students and 13 post-graduate students (1980–81 data). The duration of BISM course is 5 1/2 years. The students graduating from this college are eligible to be appointed in Government's Indian medicine health services units in the state.

40. Gould, op. cit. ( ), p. 510.

41. Freidson, op. cit ( ), pp. 51–61.

42. Gound, op. cit. ( ), p. 510.

43. Ibid.

44. Spiegel and Bachaut, op. cit. ( ), p. 107.

45. Abramson, op. cit. ( ), p. 153.

46. Spiegel and Backhaut, op. cit.

47. Giggs, op. cit. ( ); Mckinley, op. cit ( ); Brooks, op. cit. ( ).

48. Spiegel and Backhaut, op. cit., p. 160.

49. Giggs, op. cit. ( ), p. 107.

50. Gould, op. cit. ( ), p. 510.

51. Suzanne, et. al., op. cit. ( ), p. 749; Heggenhougen, op. cit. ( ), p. 43.

52. Abramson, op. cit. ( ), p. 33.

53. Friedson, op. cit. ( ), p. 9.

54. McDonald, op. cit. ( ), p. 9.

55. Pillai, op. cit.

56. Hyma and Ramesh, op. cit. (10).

ADDRESS OF THE AUTHORS

Mr. B. Hyma
Deptt. of Geography and Renison College
University of Waterloo
Waterloo, Canada

Mr. A. Ramesh
Deptt. of Geography
University of Madras
India