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A CONCEPTUAL FRAMEWORK FOR DETERMINING BASIC CONCEPTS IN AN EXTENSION EDUCATION PROGRAM NECESSARY FOR A PROPOSED ROLE STRUCTURE CHANGE OF CONSUMERS OF HEALTH CARE

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirement for the degree of Doctor of Education

in

The Department of Extension Education

by

Adela Rogers Lambert
B.S.E., Northwestern State University, 1959
M.S., Emory University, 1962
August, 1973
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UNIVERSITY MICROFILMS
Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (1).
Medicine is an exquisitely sensitive indicator of the dominant cultural characteristics of any era, for man's behavior before the threats and realities of illness is necessarily rooted in the conception he has of himself and his universe (2,2).
Sincere appreciation is expressed to all persons who helped to bring this study to a conclusion:

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ABSTRACT

The objective of the study was to devise a tool to identify knowledge and higher level cognitive needs of consumers of health care in order to bring about a role structure change.

The sample was drawn by the quota method. The criteria were that respondents live in low-income neighborhoods served by aides and that they volunteer to participate in the program. Each aide selected a minimum of 50 families on this basis. There were 227 in the study.

The contemporary role was identified from the standpoint of several models. The projected role structure dimensions were 1) maintenance information, 2) general information and 3) cognition. The knowledge, or maintenance, index consisted of maintenance and general information. The cognition index consisted of responses to the questions on cognition. These indices became the tool.

The maintenance information section of the knowledge index has potential for use, as optimum health at the basic level of health care is universal. The general information section can be used with additions and/or deletions dictated by consumer needs. To cite consumer groups with large numbers of aged persons will have different needs from those with large numbers of preschool children. The cognition index was developed in the area of temperature. Other cognition indices need to be developed for other basic concepts.
Possible related variables of consumers in the study were participation in groups, courses or programs, primitive, folk or scientific medical practices and actions and perceived actions of others in similar situations. Participation was analyzed with socioeconomic factors of family income, occupation of the male head of house and education of mother. No significance was found between the mean socioeconomic scores and group participation. Significance was found between the number of adults participating in courses or programs and the number and type in which they participated. The type of program in which most participated was related to economic skills although 83 per cent of the respondents and 56 per cent of the spouses considered themselves retired. Practices and actions were analyzed with the knowledge index. No significance was found between mean scores and primitive and folk practices and actions. Significance was found between the mean knowledge index scores and customs practiced. However, the scores tended to increase as the number of practices reported increased.

The tool has potential for standardization and ease of administration to identify and evaluate objectives for courses or programs. Recommendations for further study included variables of volunteerism, health care knowledges taught in elementary schools, the study of other socioeconomic factors which might be related to health maintenance, follow-up on courses or programs to increase employment skills, in depth study of folk and primitive medical practices and a definition of retired.
CHAPTER I

INTRODUCTION

PURPOSE

This study was designed to develop a conceptual framework for determining some basic concepts of the cognitive domain which are necessary for a proposed role structure change of consumers of health care. A conceptual framework which is flexible enough to gradually be revised and expanded to include other subcultures in this society and other societies with similar subcultures.

The study was specifically concerned with consumer health care activities performed by consumers prior to the decision to enter the health care system, to seek professional help. The basic concepts considered were those which relate to self-help health care knowledges and skills which are necessary for consumers to know in order to maintain their own health and the health of family members.

Active participation in their own health care is a new experience to many consumers. This orientation requires changes in the role structure. The purpose of this study was to determine the basic concepts necessary for consumers to actively participate in their health care. In addition, it was proposed to devise a tool to evaluate consumer need in the area of cognitive ability of one basic concept.
If either, or both, of these goals can be achieved, it is seen as aiding program planners and curriculum developers to more easily determine concepts and focal areas to be presented in a given program to a given group of consumers, clients, at a given time.

BACKGROUND

... any set of beliefs and attitudes in the health-disease area will be integrated with other important belief and practice systems. ... beliefs and attitudes toward disease in any group will be held with tenacity and assurance that they are quite adequate to explain and handle illness (3, p. 91).

Health and health care have social as well as biological implications. A study of health care reveals several major trends.

At the macrolevel in the social structure, the knowledge explosion which followed the industrial revolution caused changes in all social institutions. These changes brought about a shift in the orientation to health care. The shift was a movement from treatment-cure to prevention-maintenance.

At the microlevel in the social structure, changes occurred within the role structure of consumers and providers of health care. The provider, usually closer to the knowledge source, was better able to influence the approach. However, the belief system of all affected the way in which each functioned.
Also at the micro level, role relationships between the provider and the consumer changed. Once determined almost exclusively by the provider, where other than chronic conditions existed, responsibility began to be shifted to the consumer for some maintenance knowledges and skills. The provider, in instances, encouraged this change.

**Treatment-Cure/Prevention-Maintenance**

During the development of the present system, specialization was believed to offer the best means for getting the latest technological developments to the population. Individual practice gave way to group practice. Group and individual practice together did not seem to meet completely the health care needs and a trend toward more highly organized health care delivery subsystems evolved (4). Board Certification of the Family Practitioner, established recently, indicates a trend back to generalization.

The prevention-maintenance approach, although slow to develop, is seen as a solution to the problem of getting technological advances and research findings to consumers in a unit of time and in such a way that optimum health care results. The system continues with insufficient numbers of providers and increased utilization by consumers (5,6). This affects the implementation of the prevention-maintenance approach on a large scale. Therefore, while it is employed to some extent, the treatment-cure approach predominates.
Scientific/Nonscientific

These approaches, too, coexist in the system. Both scientific and nonscientific systems operate on the basis of causal relationships. However, the causes are perceived differently.

One type of nonscientific approach is primitive medicine. The supernatural, witches, incantations, charms and evil eye are considered causes of illness. A second type, folk medicine, is in some ways similar to and in other ways different from primitive medicine. It is that traditional body of beliefs held by non-professionals in any society concerning the cause of illness and the ways of treating it (3). Like primitive medicine, the beliefs are backed by tradition and respect for group members. Unlike primitive medicine, reliance is more on the natural. Folk medicine beliefs are based on home remedies. Primitive medicine has as its basis in beliefs considered magical. Both lack the experimentation and documentation characteristic of scientific medicine. Scientific medicine "... depends on objective observation, experimentation, the seeking of natural causes..." (3, p. 93). Primitive and folk medicine existed early in the history of man. Later, they coexisted with scientific medicine.

Cromagnon men progressed beyond the need to devote all energies to survival and were able to concern themselves with aiding the injured and sick (7).
Philosophies of early river, Hebrew and later Medieval peoples were for the most part related to cause and effect, but in a different way. Early river colonists believed illness to be due to man's failure to act at one with nature or Tao. Hebrew and later Medieval thought declared sin the cause and illness the effect. Later river colonists believed illness to be due to evil spirits (7; 8).

Atkinson (8) and Murphy (9) wrote of highly organized health care practices in Egypt, stating Egyptian priests were specialists. Murphy wrote:

... pity the poor patient with the swollen legs, distended abdomen, faulty vision and headaches of an advanced heart-kidney disease. He must have been dosed and prayed over in every doctor's office and temple from the Libian desert to the Red Sea (9, p. 13).

Murphy suggested specialization was due to the dictates of Thoth. Sigrist (10) proposed that medical knowledge was very highly developed and that no individual could practice except as a specialist.

Health care through history shifted from predominately non-scientific to predominately scientific. Throughout history, and today, a variety of healers work to bring about a state of health (3; 10; 11). Too, diversity among and within nations exists.

"Guardians" in Malawi give bedside care to friends and family, in and out of hospitals. Medical assistants who see about three hundred persons a day, diagnose on the basis of a single symptom. Village medicine, primitive and folk, fills the gap (12).
In Senegal physicians also practice scientific medicine, while village medicine is practiced within the extended family system (12).

The division of labor based on Moslem cultural requirements has the advantage of providing rural areas with male nurses in Sudan. However, Redfield writes, "... in dispensaries and hospitals, physicians seem to lack many of the elements essential to the practice of modern medicine" (13, p. 74).

Medical practice in Thailand is based on the western model, but the culture is Asian-Buddhist. In the former there is a two way flow of information and in the latter, for the most part, the flow is one way. This may account for what Bryant (12) perceives as consumer indifference to the health care system.

Mexican folk medicine includes the "hot-cold" belief.

... honey is very "hot," and it should not be followed by water, which is cold. If a man has a fever, he is hot, and he may be treated with moderate amounts of herbs or foods which are cold. On the other hand, a person who is weak is "cold" and should be given "hot" things to eat and drink (13, p. 129).

The amount and consistency of the blood are important factors in Mexican folk medicine (14). The consistency of the blood and its state of activity are important in North American cultures, recall the need to "thin the blood" in the spring and consider the number of available patent medicines for "tired blood."
In Colombia, the university acted to become an agent of change. It supported a health center in a rural village. However, many persons were not reached. Physical obstacles to remote areas prevented many from reaching the system. Yet, when these services were made accessible, they were not used as much as was expected (13). While physical and psychological accessibility are factors in the use of the health care system, Redfield writes, "... belief in magical etiology of disease, which is widespread in Colombia, may be a major deterrent" (13, p. 115).

... The dominant system of belief and practice in matters of health in the United States is scientific medicine. Because of its very dominance many who practice it do not realize that another system holds sway to a lesser degree and in a less obvious sense to be sure (3, p. 115).

The American Cherokee believe that man at one time lived in harmony with all living things. At this time there was no illness. Because of disharmony, through carelessness and injury, the animals each sent man a different disease. The plants took pity on man and each provided an antidote for each disease (15). The use of plants today as medicine is common in the dominant and in some of the sub-systems (16; 17). In addition to using plants to retain and restore health, some encourage other health habits (18; 19).

"Healing movements have sprung up at various points in history in almost all the world's religions. . . ." Glock states in an article, "The Sociology of Religion" (20, p. 161). Coexisting with these beliefs is the ability to successfully transplant vital organs and the ability to sustain life beyond a point that professionals agree
life exists.

Throughout history and in the countries of the world today the scientific and nonscientific approaches to health coexist. The belief system which predominates in the society and its subcultures determines function at all levels. It affects and is affected by all institutions within the society. It is manifested at the microlevel in changes in role structure.

**Changing Role Relationships**

Contemporarily, as well as historically, health care is not universally adequate. Strauss (21) lists fourteen factors involving health care which identify "medical ghettos." Although his reference is to the poor, frequently those who are not "poor" have similar problems. Some of those he listed are gaps in communication, insufficient information, discrimination on the basis of treatable conditions, the definition of "care," and assumed motivation of the consumer. In a special report on the health of the nation, the Carnegie Commission of Higher Education noted, Americans deserve and can afford better health care (22). From 1960 to 1970 health care costs rose 170 per cent. The additional costs were mainly due to new techniques, drugs, facilities and inflation. The inability of the present system to prevent illness is costly in emergency, intensive and rehabilitative treatment. "We are investing more of our nation's resources in the health of our people but we are not getting a full return for our investment," reported the President of the
United States in a message to the House of Representatives on Health (23, p. 1). Physicians are concerned about the dilemma. Dr. Bales writes, unless the full potential of the health care team is realized, the patient will continue to suffer (24).

Although providers continue to look for a solution, the answer to the dissemination of current technological findings to all segments of the population in such a manner and in a time interval that would provide optimum health care does not seem to have been found.

Providers are usually closer to the knowledge sources and it is their orientation which has more influence on the approach. The approach is a significant factor in determining the knowledge base, skill development and help seeking patterns of consumers. The approach determines the roles of consumers and providers. Role relationships are in a process of change.

Health care in the past was considered a privilege. Prior to licensure of health care practitioners, the quality of care received by consumers depended on the individual provider. Through time, the quality of care came to depend upon the ability of the individual consumer to pay for services as well as the physical and psychological accessibility to those services. Even in countries with national insurance, private practices are maintained and supported (25; 26).
Recently, health care came to be considered a right. The Social Party Platform of the 1930's proposed health care as a right of all people, not the privilege of a few. This led to the Social Security Act of 1935. Decades later, medical indigency of the aged became an issue. Current concern is focused on health care for all citizens.

Increasingly, health care is being considered the responsibility of consumers as well as providers. The responsibility is shifting in two important ways. One shift is among providers. The other is between providers and consumers.

The multidisciplinary team concept, one in which a number of different types of professionals, such as a doctor, a nurse, a social worker and a health aide work together, is a shift among providers. It is applied with increasing incidence and varying degrees of success to a greater variety of health care settings.

Consumers are increasingly being expected to assume responsibility for their health. Currently consumers participate in their health care when chronic conditions exist (27). Trends indicate that they will be encouraged to assume responsibility in the areas of prevention of illness (3). This is a rather large concept which includes health maintenance and general information. Health maintenance includes having and seeing a family doctor regularly, having and seeing a dentist regularly, keeping immunizations current, having annual chest x-rays, TB tests when indicated, regular exercise and sufficient sleep. It also includes such things as having a first aid kit,
medicine cabinet, medical references, and a thermometer. Further, health maintenance includes keeping records of health and illness. Keeping records during health includes a record of immunizations, x-rays, history of illness and other pertinent data. Keeping records during illness includes a record of symptoms such as temperature, pain and rashes. Keeping records on temperature requires a knowledge of temperature, normal and elevated, an ability to do something about the temperature when it is elevated and an ability to judge when professional help is indicated. When consumers know these things about temperature, they can perform necessary functions in the home. Too, they can contact the provider with the type of information necessary to insure rapid and efficient care; care that will possibly mean a shorter illness, and may save a life.

General information includes knowledge of first aid procedures, such as those taught by the Red Cross, personal hygiene, nutrition, general knowledge of common symptoms such as rash, diarrhea, pain, the needs of children and the aged. It also includes such terms as terminal illness, chronic illness, drugs, alcoholic, and splint, also cough, cavities.

Essentially, what is described in the maintenance information and general information behaviors are components in the proposed role structure of consumers of health care. A difficulty in the implementation of this concept is seen in the institutionalized role structure, the current way consumers function. While this may not
be good or even adequate, it is more comfortable and less stressful, because it is familiar. Another critical factor in the success of change is an alteration of the motivation of consumers to assume an active part, even though they may see this as less rewarding than the one they now assume. A basic factor in the successful assumption of responsibility is providing consumers with a knowledge base that gives them a background from which to make intelligent judgments relative to health. In this way they can meet with success and may be encouraged to internalize the new role structure.

In summary the knowledge explosion following the industrial revolution made available knowledge in such quantities and so quickly that a gap continues to grow between acquisition and use. Making consumers responsible for their own health is seen as a gap in reducing this factor. Providers can be freer to devote more time to the preventive aspects of health, and consumers can learn how to receive better care more quickly. Teaching consumers behaviors of health maintenance and general information, as described in this chapter, is seen as a way of reducing the gap between the acquisition of knowledge through research and technology and the use of the knowledge by consumers.
CONTEMPORARY PROBLEMS

Internationally the United States enjoys an enviable position in the ability to offer health care to its citizens. Nationally, the picture lacks homogeneity.

A major problem exists within the contemporary system among providers and between providers and consumers concerning the role structures to bring about optimum health for all. Currently, most consumers are socialized in roles compatible with a disease model of health care (27). They seek care after becoming ill, frequently after irreversible changes have occurred. This often affects their self-help ability. It may also affect their type of function in the economic institution; they may be less productive and more dependent. In addition, there is an increasing inability to meet the health care needs of the population.

Other factors contribute to the picture. New programs such as medicare and medicaid, increase the utilization of the system. Lowered infant mortality rates and increased life expectancy provide the system with increasing numbers of consumers in the age categories of high use (28). Facilities and manpower are unequally distributed geographically and economically. Consumers do not have equal access for other reasons. Two primary reasons are physical transportation and psychological accessibility.
In summary, accessibility and socialization are seen as contributing to the real and the relative problem. Consumers who know how to maintain their health and have a general knowledge of basic information would be socialized as consumers of health care in such a way that psychological inaccessibility could be minimized.

Providers in Contemporary Life

There are gaps in available knowledge for consumers. Culture lag, maldistribution of providers, organization of available teaching resources and prevention attitude of providers and consumers are part of the reason for the deficiencies.

Culture lag, a concept described by Ogburn (29) as a situation which exists when one aspect of culture lags behind other aspects, can be seen as a cause of some of the problems which have developed. For example, a technological development in health care is the artificial kidney. This invention has a role in dialyzable poisons which has been stressed for over fifteen years.

... Acute accidental and intentional poisoning, once relegated to the domain of industrial medicine, is now recognized as endemic to the household. ... every physician is aware of its inherent tragedy (30, p. 904).

However, today, many communities are without them or the experienced teams necessary for their function (31).
The point has often been made that the discoveries of specialists take a generation to filter through into people's consciousness (3, p. 55).

Organization is also a problem. Community volunteer groups offer courses on mother and baby care, home care of the sick and disaster preparedness. They present workshops, lectures and disseminate information to both providers and consumers which is related to the detection, prevention, cure and long term care of persons who have illnesses involving the interest area of the organization. While the programs, for the most part, are excellent, there is no coordination of effort. Hubbard (33) suggests the gap can be reduced by improving the organization of the system.

Maldistribution, a possible corollary of organization, is one aspect of unavailability (34; 35). "Because of the complexity of modern medicine and the health care system," it is often unavailable and inaccessible to consumers (36, p. 5).

McGraw (37), in discussing the concept of disease and the part it plays in what is seen as essential to medical practice, writes that often diseases and patients are seen at different levels of abstraction, accounting for some inability to deal with the prevention of ill health.

Montagu (38) feels that prevention should be a primary function of providers of health care. Magraw (37) disagrees insisting it should be an extension of types of assistants. Kadish and Long (39) anticipate some of the problems caused by such expansion. They pose
questions which can be answered within the framework of the existing health care system. This is also seen by the Department of Health, Education and Welfare as a solution. "One of the guiding principles of the Administration's . . . (Health Education and Welfare) . . . health strategy. . ." is to build on the strengths of the system, while working on its weaknesses (40, p. 1).

Attempts have been made to reach the maximum number of consumers with optimum health care, but for the most part this goal has not been realized. No solution yet implemented has met the needs of large numbers of consumers.

. . . It may be necessary, for example, not only to make health care accessible, but actually to carry it to the neighborhoods and doorsteps of the poor - in other words, to make a present of it rather than simply being willing to supply it... (41, p. 62).

Today consumers have greater access to information about chronic conditions and medications. Health care knowledges and skills necessary for self help prior to seeking professional help, or prior to entering the system, would aid consumers in making judgments in these areas. Such a change as the one being suggested is a major one. Acculturation would take time. It would take time for these changes to become commonplace. Too, it would involve the efforts
of providers with a background in education, leadership on multi-
disciplinary teams of an innovative nature and an ability to assure consumers the program will be continued.

Provider groups vary in power and ability to implement such a change. The group with the greatest power for change is neither present in sufficient numbers nor has been prepared to teach in informal settings. The group prepared to teach in informal settings and present in the system in sufficiently large numbers is not prepared to function in leadership roles on multidisciplinary teams of an innovative nature.

The Cooperative Extension Service can meet these criteria. Always a focal point in Extension, particularly in youth programs, health care has taken on new dimensions in program planning. Health of urban residents, particularly priority clientele, the disadvantaged, alienated and the young married, was identified by the Joint Committee as an area of educational need (42).

Consumers in Contemporary Life

Contemporary health care in the United States has many problems. One of the major ones is that of reaching people, not only in the general population, but more specifically in the age categories of high use. Both of these, the very young and the elderly, because of cultural economic patterns are most often found in the home. The family unit, then, would seem to be an effective avenue of approach for reaching persons in the high use categories.
The problem seems to be not only one of reaching them but also of developing an efficient plan for reaching them. This might be done by directing the program to a single individual. The person most likely to be caring for the health needs of persons in these categories, one who can utilize and disseminate the information would be the mother, mother substitute or person functioning in the role of mother. The idea then of reaching the disadvantaged, alienated and residents of low-income neighborhoods and young married through the mother becomes one which offers promise.

In planning such a program it is necessary to determine consumer knowledge and skills in the area of the concepts considered necessary to implement the proposed role structure changes. Little is known of consumer knowledge or practice in the area of maintenance.

... Since disease is an abnormal state that lends itself to classification into syndromes and entities, one tends to think of health or nondisease as all encompassing and without specificity... If a diseased person can be specifically sick, why is it not logical to suggest that a nondiseased one can be specifically healthy (43, p. 324)?

Meador, then, suggested that in planning for the role structure changes a model needs to be developed which can identify the necessary health care concepts which are basic to optimum health. Such concepts were suggested earlier in the area of health maintenance, general information and cognition.
The Consumer Population

Health care concepts basic to optimum health are the same wherever people are found. A wound needs to be kept free from pathogenic organisms to remain free from infection in the United States, in Malawi, in New York and in Mississippi. Cognition of such concepts was tested in this study.

The research population was drawn from the general area identified in a report of the Joint USDA-NASULGC Study Committee on Cooperative Extension (42). The research population consisted of residents of low-income neighborhoods, in East and West Baton Rouge Parishes.

Facilities available to the research population were numerous. Hospitals, public health agencies, volunteer and publicly funded agencies functioning relative to a specific disease entity or system were available. One hospital had two disease-specific clinics.

Intercommunity transportation was provided by three public facilities. Intracommunity transportation was provided by a community bus system. To supplement this two health related bus services were provided; however, the adequacy of the transportation network is questioned because of the presence of a highly organized taxi system serving this population.

There was a need to provide the community with a source of consumer health information. By maintaining health, consumers could reduce provider time required for treatment-cure and increase
the amount of time available for health maintaining functions. The ultimate goal being improved health for the community.

In summary community resources were not available to teach health care information. Providers and consumers expressed a need for change in the system. A provider was available to help bring about change at the microlevel, in the role structure. It was necessary to identify the present structure so that planned change could be facilitated. A group of consumers in need of such a program was identified as those in low-income neighborhoods.
16. **Regression Coefficient.** This refers to the change in knowledge per unit change in cognition. The value derived indicates the slope of the line; for example, the line may progress up or down as it goes to the right.

17. **Male Head of House.** This refers to the main wage earner. It refers to the female in the absence of a male head of house.

18. **Role Structure.** This term refers to the framework of the role, its components. At the micro level, role structure refers to norms and can be expressed in terms of behavior, or expected behavior. At the macro level, role structure refers to the accumulation of roles, some call this situational or stationary. This study was concerned with the role structure at the micro level. It was concerned with identifying contemporary norms and projecting norms for a changed role.

**HYPOTHESES**

The study was composed of two segments, an exploratory and an experimental. The exploratory segment dealt with the identification of some of the components of the role structure of contemporary consumers and those of consumers functioning in the changed role structure. The latter became the basis for health care knowledge items on the instrument.
The study was basically exploratory, it was desired to develop a tool to aid program planners and curriculum developers in the designing and evaluating of objectives for programs planned to meet health care needs of consumers. The purpose of designing the tool was to help consumers to function within the projected role structure changes.

The purpose of the study was to design the initial framework of the tool which would indicate health, knowledge and cognition. It was not possible to study all variables associated with health care knowledge. Therefore, it was decided to investigate some of the more pertinent areas which might affect consumer knowledge and/or cognition scores.

Socioeconomic status indicators are frequently linked with other social variables. It was decided to study socioeconomic status indicators of occupation of the male head of house, family income and education of the mother. Two factors which may vary with the socioeconomic status indicators are group membership and adult participation in courses or programs.

Basic health maintenance and general information (knowledge index) and two factors which may vary with it were studied. The two factors were primitive and folk medical practices and actions of respondent and perceived actions of others where knowledge of effective home therapy of fever.

Within the above stated limitations, the following hypotheses were derived:
1. There is no significant association between the knowledge index and the education of the mother of families in the study.

2. There is no significant association between the cognitive index and the education of the mother of families in the study.

3. There is no significant association between the mean socioeconomic index scores and group membership type of consumers in the study.

4. There is no significant association between the mean socioeconomic index scores of the families in the study and the number of adults participating in courses or programs.

5. There is no significant association between the mean socioeconomic index scores and the number of courses or programs participated in by adults in families in the study.

6. There is no significant association between the mean socioeconomic index scores and type of courses participated in by adults in families in the study.

7. There is no significant association between the mean knowledge index scores of consumers in the study and the number of health care beliefs held.

8. There is no significant association between the mean knowledge index scores of consumers in the study and the number of home remedies used.

9. There is no significant association between the mean knowledge index scores of consumers in the study and the number of home remedies discontinued.

10. There is no significant association between the mean knowledge index scores of consumers in the study and the number of customs practiced.

11. There is no significant association between actions of respondents and perceived actions of others in relation to effective home therapy for fever.

12. There is no significant association between the socioeconomic indices and cognition scores of consumers in the study.

13. There is no significant association between socioeconomic indices and the knowledge index.

14. There is no significant association between the maintenance index and the cognitive index scores.

Significance was considered to exist at the .05 level.
FOOTNOTES


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CHAPTER II

THEORETICAL FRAMEWORK

Current beliefs and knowledges related to the problem were mainly in the areas of determining the role structure of contemporary consumers, identifying concepts basic to proposed changes and devising a method of determining knowledge needs of consumers in the area of these concepts.

MODELS OF CONTEMPORARY CONSUMER ROLES

The conceptual framework determines the way members of a society handle health and illness and how providers and consumers are taught to work with health and illness. How this is done can best be described in terms of models. Contemporary consumers are seen to function within several models of health care. Individually they may function in more than one simultaneously. Some of the major models are:

Family Interaction - The family is seen as the unit which is responsible for the health and illness of its members.

Medical - Labeling of symptoms or syndromes is the criteria for functioning within the framework of this model. Once identified, or labeled, treatment and prognosis can be determined,
Moral - Health is seen as the result of moral living. Illness is seen as the result of sinful behavior. It is concerned with behavior which is moral-immoral (1).

Acute-Chronic - While defined as a single model, each functions as a polar type. The type of function is determined by the need of the cooperation of the consumer to participate in his own health care (2).

In order to give these definitions another dimension, they are presented in Figure 1. The process concepts of each model are presented as they relate to type, prevention, individual considered responsible, maintenance, treatment and rehabilitation. These concepts and their placement were for the sake of study. It is suggested that further research might improve placement of the concepts.

A commonly accepted consumer role during illness is the one suggested by Parsons (3). It is a socially accepted deviant role when the consumer meets certain criteria. The consumer must (1) consider the role undesirable; 2) seek and cooperate with competent help; and 3) relinquish the role as soon as possible. It compares with the role structure of the acute dimension of the model presented by Szasz and Hollander (2).

No model for consumers of health care in preventive or maintenance roles was found.

KNOWLEDGE INDEX

In order to derive a Knowledge Index it was necessary to determine how the consumer would function in the proposed changed structure. Next it was necessary to find a way to determine the cognitive skills of the consumers in relation to the proposed change.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>TYPE</th>
<th>PREVENTION</th>
<th>PERSON RESPONSIBLE</th>
<th>KIND OF MAINTENANCE</th>
<th>TYPE OF TREATMENT</th>
<th>REHABILITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MEDICAL</td>
<td>physical</td>
<td>immunizations care of body</td>
<td>doctor</td>
<td>routine tests check-ups</td>
<td>physical</td>
<td>rid body of cause</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>repair damage</td>
</tr>
<tr>
<td>2. MORAL</td>
<td>non-physical</td>
<td>avoid sin</td>
<td>individual</td>
<td>live right morality</td>
<td>nonphysical</td>
<td>change behavior</td>
</tr>
<tr>
<td>3. FAMILY</td>
<td>non-physical</td>
<td>sociophychological logical factors</td>
<td>family</td>
<td>ability to change and</td>
<td>nonphysical</td>
<td>sociopsychological factors</td>
</tr>
<tr>
<td>INTERACTION</td>
<td></td>
<td></td>
<td></td>
<td>grow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ACUTE</td>
<td>either physical or non-physical</td>
<td>knowledge of causes</td>
<td>doctor</td>
<td>prevent illnesses and emergencies</td>
<td>physical or nonphysical</td>
<td>determined by physician</td>
</tr>
<tr>
<td>5. CHRONIC</td>
<td>either physical or non-physical</td>
<td>prospective medicine</td>
<td>individual</td>
<td>maintain medical regimen</td>
<td>physical or nonphysical</td>
<td>revised optimum state of health</td>
</tr>
</tbody>
</table>

Figure 1. Some process concepts of five common contemporary health care models.
Suggestions offered by providers fell into one of the two categories mentioned earlier, health maintenance and general information, although not listed in that order (4). Health maintenance seemed to involve planning, while general information seemed to involve action. To cite, health maintenance or planning could be seen to involve having a thermometer or a first-aid kit. Action could be seen to involve knowing something about some necessary basic concepts such as burns, coughing and drugs. Both included care of all age groups during health and common illnesses, initial care during emergency situations and preventive and maintenance aspects of health.

It was contended that the ability of consumers to plan and to take action could vary with a number of social factors, such as income and education. For this reason a socioeconomic index was considered.

**Socioeconomic Index**

Measurable illness, reported days of restricted activity, length of hospital stay, and prevalence rates for reported illnesses vary inversely with socioeconomic status as measured by a variety of indicators Lawrence reported (5).

Gordon (6) used a multidimensional approach to the study of variables which deal with socioeconomic status. None of the studies was standardized on preventive health variables.
Education of the mother, head of household and adult respondent showed a strong direct relationship in some studies (7). Blood and Wolfe (8) found that education of the female head of household to be associated with most measures of family health decisions. Tyroler, et al., used the female head of household because of her accessibility, knowledgability regarding other family members and ability to determine the health status and behavior of family members (9). It is common practice to use the female in public health surveys.

While education of the mother has been cited as a predominant variable, Green (10) found that it was only so for the white majority. He found family income to be a more predominant variable in nonwhite populations to account for preventive health behavior. Green defined preventive health behavior as actions "... taken in the absence of immediate threat or experience of illness" (10, p. 6).

In addition to using a correction factor for ethnicity, Green also corrected the income characteristic for geographical location within the United States. He developed "... a tool or measurement procedure by which the health educator can predict or anticipate the status identities of individuals or groups" (10, p. 8).

Cognitive Objectives

Cognitive skills involve concept learning. Concept learning is composed of a number of important aspects. Psychomotor and affective domains were not considered part of the study.
the study was concerned with was the cognitive ability of the consumer at a given point in time.

To study cognitive skills at the basic level and as these skills progress along a hierarchy, Bloom's (11) construct was used. It was felt that this work was elaborate enough to permit study of a wide range of concepts, and concise enough to determine location along a hierarchy. In a study conducted in 1971, Verma (12) developed a conceptual framework for studying and implementing changes in role structure of extension dairy agents using Bloom's model.

The hierarchy, as developed in the Bloom Taxonomy, has six levels. Knowledge is the most basic and may be simply definitional, recall of information or statements of fact. Comprehension is more complex, involving having to put the knowledges in one's own words. Application stresses capacity to use or put into practice the concept. Analysis is the ability to break the concept down into its component parts. Synthesis is the ability to unite parts of one concept with parts of other concepts to form a new construct.

Evaluation is the ability to judge knowledge (11). Grunlund (13) applied the concepts in the hierarchy to an educational situation. Cognitive learning was studied within this framework.
FOOTNOTES


CHAPTER III

RESEARCH DESIGN

MODEL

It was possible to use a model of social action, program planning or curriculum development to achieve the purpose of the study, as each is seen to fit into a general model of research. The chief determining factor is seen as the means employed to bring about change. These and other constructs were seen to fit under broad general headings. Figure 2 is included to show relationships among constructs while considering the process of change. Each concept received placement upon the chart after much consideration and consultation. However, in order to consider any placement relatively unalterable, research needs to be done in the area.

Beal (1) in discussing social action, Flint (2) program planning, and Tyler (3) curriculum development seemed to consider the planning of change via different conceptual routes. This was found to be true also with studying adoption of practices (4) communication (5) leadership (6) and problem solving (7). Bertrand sees, "The final master process in all social systems is social change" (8, p. 11). The
<table>
<thead>
<tr>
<th>CHANGE MODELS</th>
<th>ACTION PROCESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTENSION</td>
<td>PLANNED CHANGE</td>
</tr>
<tr>
<td>SOCIAL ACTION</td>
<td>initiation</td>
</tr>
<tr>
<td>PROGRAM PLANNING</td>
<td>advisory group</td>
</tr>
<tr>
<td>TYLER MODEL</td>
<td>sources</td>
</tr>
<tr>
<td>RESEARCH</td>
<td>formulate problem</td>
</tr>
<tr>
<td>ADOPTION</td>
<td>aware</td>
</tr>
<tr>
<td>SOCIOLOGY</td>
<td>personality</td>
</tr>
<tr>
<td>COMMUNICATION</td>
<td>source and destination</td>
</tr>
<tr>
<td>LEADERSHIP</td>
<td>group type</td>
</tr>
<tr>
<td>PROBLEM SOLVING</td>
<td>define problem</td>
</tr>
<tr>
<td>ROLE OF TEACHER</td>
<td>planner</td>
</tr>
</tbody>
</table>

Figure 2. Ten change models and proposed action processes having conceptual similarities.
goal, then, is seen as the same. The approach to the goal is seen in terms of the conceptual framework of the approach to the goal. The choice of conceptual framework depends upon the manner in which the problem is approached and is to be solved. Therefore, Tyler's model was selected for use here. The study and the research design are presented within the framework of Tyler's model. Figure 3 is an open system design flow chart which indicates this application. While the Figure frames general concepts leading to change, the end is seen as the same, change. The means, the action processes, are seen as organized differently in order that a particular type of change may be effected. Therefore, the substructures, while present are seen as organized in a different manner. To cite, in Tyler's model, learning experiences are selected and organized to achieve change through curriculum development. In the research model, design components are selected and organized to achieve change through implications for curriculum development. This study was seen as one having implications for curriculum development. Therefore, within the overall framework of Tyler's model, components in the research design were used.

**Sampling**

Providers of health care and/or related disciplines and consumers were sampled relative to basic concepts of the proposed role structure change. Specifically, provider input came from two sources:
Figure 3. An Open System Flow Chart Indicating the Use of the Research Model Implemented Through Tyler's Major Concepts. It is possible for a provider to consider a job concept for inclusion in a job description and using Tyler’s model analyze it up to the evaluation without interruption. It is also possible that the provider may need to return to a previous step because of evaluation along the way. This chart indicates the flow of the research method through Tyler’s model using the concepts in the study.
1) health care providers from Louisiana State University Agricultural and Mechanical College Medical School and Earl K. Long Memorial Hospital,

2) education and related discipline specialists from Louisiana State University Agricultural and Mechanical College, Medical School, Continuing Education, Sociology and Extension Education, and from Southeastern University of Louisiana, Baton Rouge Campus.

Consumer input came from ancillary provider departments and clinic patients at Earl K. Long Memorial Hospital. Their responses were the basis for the information collected on the instrument in the area of health maintenance.

Consumers sampled to participate in the research study were selected by quota sampling. The criteria for selection was that respondents reside in low-income neighborhoods served by health aides, and that they voluntarily participate in the program. There were four aides. Each aide selected a minimum of fifty families.

Data

Over fifty basic health concepts were suggested by providers (figure 4). All appearing in Personal Health, Positive Steps and Personal Health Care were included as items on the instrument. Medical records and information consumers should have when they call the doctor or the clinic were used from the category of Health Care System. All of the additions were used except the concepts ear ache and parasites. The deletion could be disputed. They were deleted because the questionnaire needed to be shortened and one
Greater Concern for Personal Health:

- Personal hygiene
- Dental care, including fluoridation
- Nutrition
- Mental health, including drugs, alcohol and sex
- Family life

Positive Steps to Prevent Illness, Occurrence to Prevent Progression of Minor Illnesses and to Prevent Dependency through Rehabilitation Following Catastrophic Illnesses:

- Immunization
- Early recognition of disease
- Need for medical tests and x-rays
- Health hazards (obesity, family history of heart disease, smoking, alcohol etc.)
- Poison control

Health Care System: (Resources Available for Acute Emergency), Terminal Care, and Rehabilitation:

- How to obtain health services
- How to be a good patient (information you should have when you call the doctor or clinic)
- Medical records to keep
- Health insurance and how to use it
- How to identify dependable health services (avoiding quacks)
- When do you need an ambulance and how to get it

Personal Health Care:

- What to do until the doctor comes
- Danger signs which indicate need for care
- Caution in over-the-counter drugs
- Home remedies and how to use them
- Emergency first aid (cuts, burns, drowning, choking, splints, etc.)
- Home care for the aged
- Home care for the chronic and terminal patients
- Infant and child care (9, p. 18)

Additions:

- First aid kit
- Pain
- Fever
- Rash
- Nausea
- Diarrhea
- Ear ache
- Medical references
- Medicine cabinet
- Parasites

Figure 4. Basic concepts suggested by providers associated with a demonstration model for a consumer health education program and additions by other providers which were considered necessary to implement health care consumer role structural changes to help consumers participate in their own health care.
question was asked on child care. These are common conditions to
cardhood. When it was decided to direct the general questions
to the knowledge level of cognition and to include one from each
general area, some concepts were deleted which might have served
well in the study. Although there seems to be logic in the
selection of items, it is realized that there is also some
arbitrariness. It was felt that while other inclusions might be
made that the study would not be biased on the basis of the
exclusions.

One of the basic concepts was selected to be studied in depth.
It was elaborated as a variable which might vary with the Knowledge
Index. It needed to be a relatively common concept, one consumers
come in contact with frequently. Temperature was selected because
it was felt that all consumers over the period of their lifetime
come in contact with temperature. However, no effort was made to
measure the amount of contact, or the learning which took place
during the contact.

The instrument was designed with two basic parts: socioeconomic
data and health data. The instrument appears in the study as
Appendix 1. Part 1 of the instrument contained questions on
socioeconomic data; Part 2 of the instrument contained questions on
health knowledge and cognition.

The socioeconomic items had two components; items for the index
and items on possible intervening variables. The score was derived for
each consumer using Green's model. Education scores in Green's coding
ranged from 28 to 73 with scores differing for males and females,
making 32 categories in all. Family income score range was from 26 to 81 in 18 categories with corrections for geographic location. The scores assigned to the South were used in the study. Occupation scores ranged from 21 to 83 for a total of 492 occupations. Occupations alone cover six printed pages, therefore, the reader is referred to Green's article. Items for the intervening variables were limited to two possibilities. One, it was possible for respondents to come from one of three groups; 1) participants in the family practice program at Earl K. Long hospital, 2) the nutrition program sponsored by Cooperative Extension, and 3) it was possible to have respondents who were not participating in either group. This was considered a possible intervening variable. Two, informal education of respondents and their family members was considered a variable which might affect their score on the socioeconomic index which would be derived from the socioeconomic data (Appendix A, Part 1, Page 1, 2).

The knowledge items had three components; items for the index (Appendix A, Part 2, Pages 1, 2) item on temperature for cognition scores (Appendix A, Part 2, Pages 2, 3) and items on two possible intervening variables (Appendix A, Part 2, Page 4). The index included items on family doctor, dentist, regular exercise, amount of sleep, immunizations, physical check-up, dental check-up, chest x-ray, TB test, record keeping of health and illness, and presence in the home of a first aid kit, medicine cabinet, medical references and a thermometer. Data on temperature consisted of thirteen objective and eight subjective questions. The objective questions were forced choice. The subjective questions were open-
ended. Data on possible intervening variables was limited to two possibilities. One, primitive and folk practices, non-scientific approaches to health care, might act as intervening variables. They were studied as beliefs, customs, home remedies and home remedies discontinued. Two, the relationship of action to belief was studied as a possible intervening variable. It was studied in the area of temperature. In one question, respondents were asked what they did when a person had fever and in a second question they were asked what they thought a person with fever should do.

Where possible questions were precoded. Following pretesting on fifteen consumers from the study population, further precoding and partial precoding was possible.

Consumers were asked to respond to the socioeconomic items on the basis of knowledge of self and family members. They were asked to respond to the knowledge questions on the basis of cognition.

Data were collected by the interview method from the sample of consumers by four interviewers. The interviewers had three training sessions prior to conducting several interviews and two sessions after conducting them. The interviews were then conducted on the rest of the sample. When the instruments were completed, items were coded by one of three coders.

One coded one section entirely. Two coded another section. Instruction, explanation, demonstration and return demonstration were performed with each coder. Spot checking was done twice during the coding procedure. When questions were open ended coders listed responses and categories for coding were determined on the basis of responses.
Three socioeconomic status indices were analyzed in the study, 1) education of the mother, 2) education of the mother and family income, and 3) both of the above and occupation of the male head of house.

The first, education of the mother, was considered as the single most important variable when family health was concerned. It was correlated with the knowledge index and cognition scores to test its significance.

The second and third socioeconomic indices were derived by Green (10). They are replicated here. One socioeconomic index consisted of three factors: family income, occupation of the male head of house and education of the mother. A second consisted of two factors, family income and education of the mother. Both were corrected for ethnicity and there was a correction factor for geographic location where income was included.

For a more detailed explanation of the derivation of the indices and the factors included in them, the reader is referred to Green (10). He suggested the use of the two factor index when dealing with groups in which the respondents were predominately nonwhite. He also suggested testing the indices in communities other than those for which they were designed. Both indices were correlated with the knowledge index score and cognition score.

Correlation was used to determine if or not it could be statistically substantiated that any of the three indices were significantly related to the knowledge index and to the cognitive index.

Analysis of variance was performed on two sets of possible intervening variables using the two factor index, family income and education of the
mother. The index was selected to test its value in this community.
Value was seen in replicating Green's work. Family income and
education of the mother were analyzed with group membership types
and with adult participation in informal educational programs.
There were three possible group types, families participating in the
family practice program or the nutrition program or families
participating in neither. Adult participation in informal
educational programs was studied on the basis of number of adults in
all families participating, number of courses or programs taken and
type of course or program taken.

The knowledge index score which was derived by adding correct
responses to maintenance and general health information items was
analyzed with primitive and folk medical practices and also with the
stated actions of consumers in relation to their own actions and the
perceived actions of others.

The knowledge index score was derived on the basis of four
steps:

1. Correct responses given by the mother for all family
members to nine questions on maintenance information
were totaled and divided by the total number of family
members.

2. Correct responses given by the mother for herself to nine
additional questions on maintenance were totaled.

3. Correct responses to 22 items on general information were
totaled.

4. The maintenance information score (steps one and two) and
the general information score were totaled.
This total was the knowledge index score for the consumer.

Primitive and folk medical practices were studied by examining beliefs, home remedies and customs. Actions of respondents and perceived actions of others were studied by analyzing possible appropriate responses to caring for someone with fever.

The knowledge index and the socioeconomic indices were correlated with the cognitive index to determine if or not any of the socioeconomic indices could be combined with the knowledge index to form a maintenance index.

The cognitive index scores were derived in the study on the basis of responses to twenty questions on temperature. Questions on each level of Bloom's (11) hierarchy were items on the instrument. Score range was 0-3 for each item. Grunlund (12) was used for verification when his publication became available.

Cognition scores at each level of the hierarchy were analyzed with the socioeconomic indices and the knowledge index to derive a maintenance index. A maintenance index was derived. Its predictive value in relation to the cognitive index was analyzed using the regression formula:

\[ C = r_{CK} \frac{C}{C_K} \]

An elaboration of the procedure appears as Appendix D. A prepared computer program model, SAS, was used for the analysis.
FOOTNOTES


CHAPTER IV

ANALYSIS

Mothers of 227 families living in low-income neighborhoods in East and West Baton Rouge Parishes were selected by quota sampling. Four aides selected a minimum of fifty families. The criteria for selection were that they live in low-income neighborhoods and volunteer to participate.

They were asked six socioeconomic questions, 12 health maintenance and 22 general health questions and 20 questions on temperature measures at six levels of cognition.

Analysis of variance was performed on group membership type and participation of adults in courses or programs, with family income and education of the mother (socioeconomic index). Analysis of variance was also performed on primitive and folk medical practices and actions and perceived actions, with maintenance and general health information (knowledge index).

Three socioeconomic indices, the knowledge index and scores at each level of the cognitive hierarchy were correlated to test for a significant relationship. A maintenance index was derived with predictive value for cognitive scores.
RESPONDENT CHARACTERISTICS

Respondents were predominately black (87%), females (91%) with an average annual income of $2249.50 within a range of less than $1,000.00 to $24,999.00 (Table 1). They lived in low-income neighborhoods. The socioeconomic status indicators of family income and education of the mother range was from 29.70 to 70.31 within a possible range of 29.70 to 85.90 according to Green's socioeconomic status index coding. The mean socioeconomic index value was 43.78. The knowledge index range was from 11 to 33 within a possible range of 0 to 40. The mean knowledge index value was 23.63. The formal education range was from 0 to 15 years with 9 as the average for the sample (Table 2).

SOCIOECONOMIC VARIABLES

Education of Mother ($H_1$ and $H_2$)

The education of the mother was correlated with the knowledge index. Significance was found at the .001 level; however, the correlation coefficient was $r = 0.3015$.

The education of the mother was compared with two socioeconomic indices which included family income. One of the two included occupation of the male head of house. It was equally as
Table 1. Reported Annual Income by Mothers of a Sample of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes Louisiana, 1972 by Frequency and Per Cent.

<table>
<thead>
<tr>
<th>Annual Reported Family Income</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15,000 to 24,999</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>$12,000 to 14,999</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>$10,000 to 11,999</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>$9,000 to 9,999</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>$8,000 to 8,999</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>$7,000 to 7,999</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>$6,000 to 6,999</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>$5,000 to 5,999</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>$4,000 to 4,999</td>
<td>38</td>
<td>17</td>
</tr>
<tr>
<td>$3,500 to 3,999</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>$3,000 to 3,499</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>$2,500 to 2,999</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>$2,000 to 2,499</td>
<td>27</td>
<td>12*</td>
</tr>
<tr>
<td>$1,500 to 1,999</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>$1,000 to 1,499</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>Less than $1,000</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
</tr>
</tbody>
</table>

*Average annual income for the group.
Table 2. Educational Level of Mothers of a Sample of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana in 1972 by Number of Years of Education, Frequency and Per Cent.

<table>
<thead>
<tr>
<th>Number of Years in School</th>
<th>Number Mothers</th>
<th>Per Cent Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>1-2 years</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>3-4 years</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>5-6 years</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>7 years</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>8 years</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>9 years</td>
<td>26</td>
<td>12*</td>
</tr>
<tr>
<td>10 years</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>11 years</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>12 years</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>13 years</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>14 years</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>15 years</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
</tr>
</tbody>
</table>

*Average years of education.
significant and manifested the same relationship as SES2 in the area of evaluation. Of the three socioeconomic indices, education of the mother showed the highest significance in four of the six cognitive areas with all three indices manifesting a negative correlation in one area. It correlated although the relationship was not considered significant.

Intervening Variables

Green's two variable socioeconomic index, family income and education of the mother was replicated for this sample.

Group Membership Type (H₁)

Group membership types were analyzed using analysis of variance to determine if a significant mean difference existed between 1) respondents participating in the family practice program, 2) respondents participating in the nutrition program, and 3) respondents participating in neither. No respondents were participants in the nutrition program. Forty-nine were in the family practice program and 179 were in neither program. Group type was not found to be significant at the .05 level. There was no significant variance of the mean socioeconomic scores of group types. The table appears in Table 3.

Participation of Adults in Courses or Programs (H₄, H₅, H₆)

Participation of adults (persons over 17) in courses or programs was studied on the basis of 1) number of adults (Table 4), 2) number of course or program (Table 5) and 3) type of course or program (Table 6).
Table 3. Relationship Between Mean Socioeconomic Score* and Group Membership of a Sample of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes Louisiana, 1972.

<table>
<thead>
<tr>
<th>Group Membership</th>
<th>Number of Families</th>
<th>Mean Socioeconomic Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Practice</td>
<td>48</td>
<td>42.94</td>
</tr>
<tr>
<td>Nutrition</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neither</td>
<td>179</td>
<td>44.00</td>
</tr>
</tbody>
</table>

\[ F = .8901, df 1.225 \quad NS \]

*The Mean Socioeconomic Score by using family income and education of mother.
Table 4. Relationship of Number of Courses or Programs Enrolled in by a Sample of Persons Over Seventeen (Adults) Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972, to the Mean Socioeconomic Score* of Their Families.

<table>
<thead>
<tr>
<th>Number of Adults Enrolled</th>
<th>Number of Families</th>
<th>Per Cent</th>
<th>Mean Socioeconomic Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>180</td>
<td>79</td>
<td>42.50</td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>17</td>
<td>48.50</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>3</td>
<td>49.40</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>48.78</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

$F = 11.435, df = 2.223; \ p = .001$

*The Mean Socioeconomic Score was derived using family income and education of mother.

The average mean score for the group was 43.78.
Table 5. Relationship of Number of Courses or Programs Enrolled in by a Sample of Persons Over Seventeen (Adults) Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972 to the Mean Socioeconomic Score on Status of Their Families**.

<table>
<thead>
<tr>
<th>Number of Courses or Programs</th>
<th>Number of Families</th>
<th>Per Cent Families</th>
<th>Mean Socioeconomic Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>180</td>
<td>79</td>
<td>42.50</td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>17</td>
<td>48.30</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>2</td>
<td>49.00</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>1</td>
<td>50.66</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1</td>
<td>55.60</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

F = 8.96, df 4.222; p = .001

*The Mean Socioeconomic Score was derived using family income and education of mother.
Table 6. Relationship of Type of Course Enrolled in by a Sample of Adults in Families Living in East and West Baton Rouge Parishes in Louisiana, 1972 to the Mean Socioeconomic Score\* on Status of Their Families.

<table>
<thead>
<tr>
<th>Type of Course or Program</th>
<th>Number</th>
<th>Per Cent</th>
<th>Mean Socioeconomic Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>180</td>
<td></td>
<td>42.50</td>
</tr>
<tr>
<td>Academic</td>
<td>5</td>
<td>10</td>
<td>46.48</td>
</tr>
<tr>
<td>Employment Skills</td>
<td>30</td>
<td>57</td>
<td>48.84</td>
</tr>
<tr>
<td>Family Skills</td>
<td>7</td>
<td>14</td>
<td>48.16</td>
</tr>
<tr>
<td>Recreation</td>
<td>10</td>
<td>19</td>
<td>49.86</td>
</tr>
<tr>
<td>Total Number of Types of Courses or Programs</td>
<td>52**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 4.989, \, df = 7,219; \, p = .001 \]

*The Mean Socioeconomic Score was derived using family income and education of mother.

**Nine of the 61 types were not available.
Only 47 of the 227 respondents (21%) reported between 1 and 5 adults in the family as participating in the courses or programs. There was significance at the .001 level between the mean socioeconomic score and the number of courses or programs taken by adults. All families with adults taking courses or programs had above average mean socioeconomic scores. A total of 55 adults enrolled in courses or programs.

Adults in the 47 families took between 1 and 4 courses or programs with 81 per cent taking only one. The socioeconomic mean score increased as the number of courses or programs taken increased. It was significant at the .001 level. Those taking one course or program had a mean score six points above those taking none. Those taking four courses or programs had a mean score 13 points above those taking none.

The variance of the socioeconomic mean score by type of course or program was found to be significant at the .001 level, also. Mean scores in Table 4 were arranged in order of increasing mean score. While no relationship existed between type of course or program (nominal data), a ranking on the basis of increasing mean score showed that as socioeconomic index mean score increased, interest increased in recreational skills. The greatest interest was manifested in employment skills with 57 per cent reporting courses or programs in this area. An evaluation of perceived employability (Table 7) showed 182, or 80 per cent, of the respondents reporting

<table>
<thead>
<tr>
<th>Employability Status of Respondents or Spouses Reporting Themselves</th>
<th>Respondents</th>
<th></th>
<th></th>
<th>Spouses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired</td>
<td>Number</td>
<td>Per Cent</td>
<td>Number</td>
<td>Per Cent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>144</td>
<td>79</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployable</td>
<td>37</td>
<td>20</td>
<td>44</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>182*</td>
<td>100</td>
<td>55**</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 83 per cent of all respondents (189 of 227) were between ages 18 and 65. Thus most of the 182 reporting being retired were in the productive age group.

**56 per cent of all spouses (55 of 98) were between ages 18 and 65. Thus over half of the spouses reported were in the productive age group.
themselves retired although 189, or 83 per cent, were between the ages of 18-65. An evaluation of perceived employability of spouses (Table 6) showed 55 of 98, or 56 per cent, reported retired although 56 per cent were between the ages of 18-65. This means that 63 per cent of the respondents and one per cent of the spouses must have been between the ages of 18-65 and considered themselves retired.

In 47 families, 59 adults took 61 courses or programs of four different types.

**KNOWLEDGE**

**Index**

The knowledge index was determined nonstatistically on the basis of necessary role structure changes identified by specialists. Consensus among specialists and in the discipline was considered validation. No statistical test was performed on items for relevance in the index.

**Intervening Variables**

Of all possible variables, the two considered here were 1) primitive and folk medical practices, and 2) what respondents do in relation to what they think others do in similar situations.
These were tested by asking respondents to state beliefs, home remedies used and discontinued and customs which they practiced and which related to health.

Respondents were asked what health care beliefs they held. The question was "Sometimes what we believe makes us decide what to do when we think about being well and being sick. For instance, some people say 'a copper bracelet will get rid of sore joints,' or 'you should wear a black string around your neck.' Does your family have sayings like these?" Using analysis of variance, no significant difference was found between the knowledge index mean score of respondents reporting beliefs and those reporting none (Table 8).

While beliefs were not statistically significantly related to the knowledge score, some relationships were noted. The mean knowledge score of the 95 respondents reporting beliefs increased slightly with the number of beliefs held.

Beliefs were in the area of primitive medicine. Two natural divisions of the responses were those related to the body and those not so related. Of those related to the body two subdivisions were evident: those that related to the upper part of the body; arms, face, eyes, neck and head, and those that related to the lower part of the body; feet and ankles. When black was mentioned, it was related to the lower part of the body. For example, many things
Table 8. Relationship of Number and Per Cent of Health Beliefs Held by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes to Mean Knowledge Score* for the Sample.

<table>
<thead>
<tr>
<th>Number of Beliefs Held</th>
<th>Number Holding Beliefs</th>
<th>Per Cent Holding Beliefs</th>
<th>Knowledge Index Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>141</td>
<td>63</td>
<td>24.03</td>
</tr>
<tr>
<td>1</td>
<td>43</td>
<td>19</td>
<td>23.23</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>13</td>
<td>22.29</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>4</td>
<td>23.54</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1</td>
<td>28.00</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

F = 1.796, df 4.22 NS

*The Mean Knowledge Index Score was derived using maintenance and general information.

The average mean score for the group was 23.63.
were reported to be tied on extremities and the neck; however, when a black string was mentioned, it was mentioned to be put on a lower part of the body.

Responses not requiring that something be done in connection with the body, were considered unrelated responses - unrelated to the body. They were divided into good (11) and bad (24) luck. Here responses related to the upper part of the body (53) were greatly in excess of those related to the lower part of the body (9). Responses included such actions as tying a string around the neck with a silver dime with a hole, swamp root beads, whole nutmeg, neck of a pumpkin, tongue of a shoe, mild feet, or small beads. All of these were listed as treatment for teething problems. Straws were suggested to be placed on a baby's head for the treatment of worms and also for shortness of breath. Nutmeg worn around the neck was also suggested for shortness of breath. Beliefs were in the primitive medical practice area.

Respondents were asked about home remedies. Specifically the questions were "Most families use home remedies when they are sick or hurt. Like making a tonic. What home remedies does your family use?" and "Are there any home remedies you stopped using because they didn't work? Can you tell me what they were?"
Home remedies were in the area of folk medical practice. Home remedies fell naturally into categories, but of a different type. The categories into which they fell were related to:

1. body systems - circulatory, respiratory, gastrointestinal, integumentary (skin), and neurological
2. diagnosed illnesses
3. symptoms - pain and fever

Lemon and honey were mentioned frequently for use with upper respiratory conditions, colds and flu. They could be used alone or with other ingredients such as whiskey, mint, vicks or antiseptic. Tallow, smoke fat and vaseline were mentioned with other ingredients and may have been used as emollients or as bases for the ingredients with which they were combined. Octagon soap and okra blossoms were reported as used for fever, dirt with vinegar for rashes and salt meat and turpentine for cuts. Few gave indications of the method of administration, if they were taken internally or applied locally.

Tea was made from available substances, peach leaf, orange peel and life everlasting bush. One respondent who mentioned life everlasting bush tea, stated that she had discontinued using it as she could no longer walk to the bush to get the leaves.

The mean knowledge score of the 74 per cent of the respondents using home remedies was low except for those using five home remedies. Of the 227 respondents only 26, or 11 per cent, reporting discontinued use of home remedies. Again, the highest mean knowledge index score was the respondent discontinuing the most home remedies.
Using analysis of variance, no significance was found at the .05 level for mean differences between knowledge index score and either home remedies practiced or home remedies discontinued (Tables 9 and 10).

Respondents were asked about health customs. The question was "A custom is a habit or something people usually do. Some families have a custom of seeing a doctor every year if they are sick or not. This is a medical custom. Would you tell me some customs related to health which your family has?"

Customs were found to be significant at the .005 level (Table 11). There was a significant relationship between the number of customs reported by respondents and their mean knowledge index score. Respondents more informed in the area of primitive medicine (beliefs) or folk medicine (home remedies) or scientific medicine (customs) showed an increase in the mean knowledge score. There was a tendency for the mean scores to go up as the reported number of beliefs, customs and home remedies increased.

Responses to the category of customs lent themselves to natural categories also, but again different from beliefs or home remedies. The categories were nutrition (117), hygiene (94), and health care (101). Items under each category appear in Table 12. Examination of the data revealed a natural dichotomy within all four categories. Time was mentioned frequently and often specified. Categories were designated regularly practiced and not regularly practiced. Specific time relationships appear in a 4 to 1 ratio with nonspecific time relationships.
Table 9. Relationship of Number and Per Cent of Home Remedies Used by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana 1972 to Mean Knowledge Score* for the Sample.

<table>
<thead>
<tr>
<th>Number of Home Remedies Used</th>
<th>Number Using Home Remedies</th>
<th>Per Cent Using Home Remedies</th>
<th>Knowledge Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>58</td>
<td>25</td>
<td>24.57</td>
</tr>
<tr>
<td>1</td>
<td>49</td>
<td>22</td>
<td>23.30</td>
</tr>
<tr>
<td>2</td>
<td>77</td>
<td>34</td>
<td>23.16</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
<td>15</td>
<td>23.64</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>3</td>
<td>23.13</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>1</td>
<td>25.00</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

F = 1.083, df 5, 221 NS

*The Mean Knowledge Score was derived by using family income and education of mother.

The average mean score for the group was 23.64.
Table 10. Relationship of Number and Per Cent of Home Remedies Discontinued by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana in 1972 to Mean Knowledge Score* for the Sample.

<table>
<thead>
<tr>
<th>Number of Home Remedies Discontinued</th>
<th>Number of Families Discontinuing Use</th>
<th>Per Cent of Families</th>
<th>Knowledge Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>201</td>
<td>88</td>
<td>23.66</td>
</tr>
<tr>
<td>1</td>
<td>21</td>
<td>9</td>
<td>23.33</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>2</td>
<td>23.00</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>27.00</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

F = -0.341, df 3.223  NS

*The Mean Knowledge Score was derived by using family income and education of mother.

The average mean score for the group was 23.64.
Table 11. Relationship of Number and Per Cent of Health Customs Practiced by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972 to the Mean Knowledge Index Score* of the Sample.

<table>
<thead>
<tr>
<th>Number of Customs Practiced</th>
<th>Number Practicing Customs</th>
<th>Per Cent Practicing Customs</th>
<th>Mean Knowledge Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>73</td>
<td>32</td>
<td>23.93</td>
</tr>
<tr>
<td>1</td>
<td>57</td>
<td>25</td>
<td>23.61</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>13</td>
<td>22.65</td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>20</td>
<td>22.51</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>7</td>
<td>26.18</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>2</td>
<td>28.00</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1</td>
<td>26.00</td>
</tr>
<tr>
<td>Total</td>
<td>227</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 3.377; \text{df} \ 6.220 \quad p = .005 \]

*The Mean Knowledge Index Score was derived by using maintenance and general information.

The average mean score for the group was 23.63.
Table 12. Type, Number and Per Cent of Total Responses to Customs Practiced by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972 by Category of Response and Time Relationship.

<table>
<thead>
<tr>
<th>Health Custom</th>
<th>Regularly Practiced</th>
<th>Regularly Not Practiced</th>
<th>Total of Category</th>
<th>Number</th>
<th>Per Cent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nutrition:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>35</td>
<td>4</td>
<td>39</td>
<td>33</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Fruit and Juice</td>
<td>18</td>
<td>3</td>
<td>21</td>
<td>18</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Balanced Meals</td>
<td>7</td>
<td>11</td>
<td>18</td>
<td>15</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Water</td>
<td>11</td>
<td>11</td>
<td>22</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Breakfast</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Vegetables</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vitamins</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Meals</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cold Drinks</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Limit Fats</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Meat</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>93</td>
<td>24</td>
<td>117</td>
<td>100</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td><strong>Hygiene:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>34</td>
<td>13</td>
<td>47</td>
<td>50</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Personal</td>
<td>39</td>
<td>8</td>
<td>47</td>
<td>50</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73</td>
<td>21</td>
<td>94</td>
<td>100</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Health Care:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest</td>
<td>40</td>
<td>40</td>
<td>80</td>
<td>40</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Check-up</td>
<td>18</td>
<td>8</td>
<td>26</td>
<td>27</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Exercise</td>
<td>11</td>
<td>4</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Proper Sleep</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Medicine</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>X-Ray</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pap Smear</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dentist</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31</td>
<td>20</td>
<td>101</td>
<td>100</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td><strong>Total of All Responses</strong></td>
<td>247</td>
<td>65</td>
<td>312</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
On examining the three categories, nutrition, hygiene and health care, some of the responses can not be considered wrong; however they are not necessarily appropriate. For example, while a daily bath is appropriate, prefacing it with "before meals" makes the response inappropriate.

While almost a third of the respondents reported practicing no customs, over 50 per cent reported practicing between one and three.

Action/Perceived Action (H11)

The second variable considered in the study which might affect the knowledge index was what respondents do in relation to what they think others do in like situations. The situation used in the study was the response to fever or temperature (Appendix B, Table 16). Statistically this did not prove to be significant at the .05 level. However, the data does seem to be significant for the study.

There were four possible response categories:

1. respondents act and perceive others as acting the same
2. respondents do not act, and perceive others as not acting
3. respondents act but perceive others as not acting
4. respondents do not act, but perceive others as acting.

Of the 227 respondents, 225 responded to the first choice.
Cognition scores were derived by adding correct responses to questions on temperature-fever. Of a possible 0-20 score, the range was 6-19 with a mean of 13.

Reference to Table 13 indicates more correct responses as the questions progressed from knowledge to evaluation. While 26, or 11 per cent, of the respondents answered none of the knowledge questions correctly, no respondents missed all of the synthesis or evaluation questions. As can be seen in the table, there were a greater number of correct responses to synthesis and evaluation questions than to the four lower levels.

Table 11 presents another perspective, in that it is an elaboration of cognition at the level of synthesis. Such elaborations were not performed on other levels of cognition. The responses lent themselves to this type of elaboration. They fell naturally into one of three sets of dichotomies; overt or covert manifestations, related (those manifestations of fever) or unrelated (such things as causes of fever) and symptoms or not symptoms. The only correct responses were either overt (vomiting, perspiring, etc.) or covert (headache, nausea, etc.) related symptoms. There were 37 per cent of the responses in those categories, indicating that 63 per cent of the responses were incorrect. Table 14 represents all responses given to the subjective question on the synthesis level of the cognitive hierarchy. Further elaboration on the questions appear in Appendix C.
Table 13. Relationship of Number of Correct Responses Given by a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972 to Cognitive Questions on Temperature, by Frequency and Per Cent.

<table>
<thead>
<tr>
<th>Cognitive Questions for Temperature</th>
<th>Number of Correct Responses</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Knowledge</td>
<td>26</td>
<td>11</td>
<td>50</td>
<td>22</td>
<td>92</td>
<td>41</td>
</tr>
<tr>
<td>Comprehension</td>
<td>9</td>
<td>4</td>
<td>62</td>
<td>28</td>
<td>107</td>
<td>47</td>
</tr>
<tr>
<td>Application</td>
<td>4</td>
<td>2</td>
<td>25</td>
<td>11</td>
<td>158</td>
<td>70</td>
</tr>
<tr>
<td>Analysis</td>
<td>5</td>
<td>2</td>
<td>186</td>
<td>82</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>Synthesis</td>
<td>0</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0</td>
<td>-</td>
<td>23</td>
<td>9</td>
<td>95</td>
<td>44</td>
</tr>
<tr>
<td>Total**</td>
<td>44</td>
<td>3</td>
<td>348</td>
<td>25</td>
<td>493</td>
<td>37</td>
</tr>
</tbody>
</table>

*There were five Cognitive Questions in the area of synthesis. The scores for questions number four and five were:
4. 93 or 40.3% and 5. 100 or 44.1%. Both of these were added to the optimum score of the other areas (3).

**More than one response may have been given however a single correct response to a question was considered correct.
Table 14. Overt and Covert, Related and Unrelated Responses to the Question. "...Fever causes other things to be wrong, other symptoms, can you name some of them..."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Overt Related</th>
<th>Overt Unrelated</th>
<th>Covert Related</th>
<th>Covert Unrelated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Symptoms</td>
<td>Symptom NonSymptom</td>
<td>Symptoms</td>
<td>Symptom NonSymptom</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>50</td>
<td>1</td>
<td>10</td>
<td>41</td>
<td>116</td>
</tr>
<tr>
<td>Neurological</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orthopedic</td>
<td>33</td>
<td>3</td>
<td>6</td>
<td>59</td>
<td>108</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>24</td>
<td></td>
<td>1</td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td>Respiratory</td>
<td>2</td>
<td>86</td>
<td>72</td>
<td>26</td>
<td>136</td>
</tr>
<tr>
<td>Diseases</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Manifestations</td>
<td>72</td>
<td>35</td>
<td>6</td>
<td>4</td>
<td>135</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>83</td>
<td>142</td>
<td>118</td>
<td>599*</td>
</tr>
<tr>
<td>Per Cent</td>
<td>18</td>
<td>14</td>
<td>24</td>
<td>20</td>
<td>98</td>
</tr>
</tbody>
</table>

*Of the 227 respondents an average of 2.6 per respondent were given.
The first step in attempting to derive the maintenance index was correlation of the knowledge index and the socioeconomic indices examined in the study with cognition scores (Table 15). In the table the socioeconomic indices are numbered consistent with the number of variables, factors, contained in them. SES1 is the education of the mother. SES2 is the education of the mother and family income. SES3 is both of the above and occupation of the male head of house.

None of the socioeconomic index scores correlated with levels of cognition as well as the knowledge index score. No socioeconomic index score could be combined with the knowledge index score at the same level of significance and with the same degree of relationship.

All socioeconomic index values for synthesis were negative. While the knowledge index significance value was low, it was not negative. No socioeconomic index compared with the knowledge index in overall significance of correlation. The knowledge index became the maintenance index.

By using a regression equation, scores were predicted for all possible scores on the knowledge index 0-40 and the cognitive index 1-6. It was necessary to extrapolate where no respondents
Table 15. Relationships Among Three Socioeconomic Status Indices*, Knowledge Index** and Levels of Cognition as These are Expressed in Correlation Coefficients (cc) and Significance of the Coefficients (sig) of a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes, Louisiana, 1972.

<table>
<thead>
<tr>
<th>Levels of Cognition</th>
<th>SES1 cc</th>
<th>sig</th>
<th>SES2 cc</th>
<th>sig</th>
<th>SES3 cc</th>
<th>sig</th>
<th>KI cc</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>0.269</td>
<td>0.0002</td>
<td>0.239</td>
<td>0.0006</td>
<td>0.260</td>
<td>0.0002</td>
<td>0.435</td>
<td>0.0001</td>
</tr>
<tr>
<td>Comprehension</td>
<td>0.110</td>
<td>0.0934</td>
<td>0.119</td>
<td>0.0698</td>
<td>0.170</td>
<td>0.0101</td>
<td>0.389</td>
<td>0.0001</td>
</tr>
<tr>
<td>Application</td>
<td>0.151</td>
<td>0.0219</td>
<td>0.022</td>
<td>0.7412</td>
<td>0.045</td>
<td>0.5024</td>
<td>0.266</td>
<td>0.0002</td>
</tr>
<tr>
<td>Analysis</td>
<td>0.134</td>
<td>0.0403</td>
<td>0.076</td>
<td>0.2554</td>
<td>0.104</td>
<td>0.1158</td>
<td>0.325</td>
<td>0.0001</td>
</tr>
<tr>
<td>Synthesis</td>
<td>-0.034</td>
<td>0.6217</td>
<td>-0.134</td>
<td>0.0415</td>
<td>-0.074</td>
<td>0.2641</td>
<td>0.017</td>
<td>0.7918</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0.080</td>
<td>0.2271</td>
<td>0.080</td>
<td>0.2271</td>
<td>0.054</td>
<td>0.5730</td>
<td>0.295</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*The three socioeconomic status indices consist of: SES1 education of the mother, SES2 education of the mother and family income and SES3 education of the mother, family income and occupation of the male head of household. Knowledge index is represented in the body of the table KI.

**Knowledge index consists of health maintenance information and general information.
scored, below 11 and above 33. The predicted scores were tested on respondents scoring 11. One was 100 per cent accurate, one 90, one 80 per cent and one 60 per cent. One was completely inaccurate, scoring zero.

SUMMARY

Socioeconomic indices and a knowledge index were correlated with the cognition index. The knowledge index alone did significantly correlate with the cognition index. Using regression analysis, it was possible to predict scores and validate the prediction.

Customs practiced varied significantly with the knowledge index and adult participation in courses or programs varied significantly with socioeconomic status index means. Beliefs and use and discontinued use of home remedies did not vary significantly with knowledge index means, nor did actions and perceived actions of others. Group membership type did not vary significantly with socioeconomic status mean scores.
SUMMARY

Health was identified as an area to be developed in the Joint Committee Report, A People and a Spirit. Also in that report, high priority audiences were identified. Two of those audience groups were low-income families and young mothers. Many in both groups were reached by contacting mothers of families living in low-income neighborhoods.

The purpose of this study was to develop a conceptual framework for determining some basic concepts of the cognitive domain which are necessary for a proposed role structure change of consumers of health care from a passive one to a participating one. A conceptual framework needed to be developed which was flexible enough to be gradually revised and expanded to include other subcultures in this society and other societies with similar subcultures. Additionally, it was proposed that a tool could be developed to aid program planners and curriculum developers with designing and evaluating objectives for programs planned to meet health care consumer needs.

Models of contemporary health care were examined and compared. A model for the projected consumer role was designed. The behaviors outlined in the second role mentioned became the items of
maintenance and general information in the instrument. Twenty items were selected for the maintenance section of the instrument. These items were considered basic by specialists and the discipline. Twenty-two items were selected for the general information section. These two became the knowledge index. Later, because no socioeconomic status index correlated significantly with the cognition index, these two became the maintenance index. Significance was found when the maintenance index and cognition index were correlated. It was then possible, by using regression analysis, to predict cognition scores of a given consumer if the knowledge index score of that consumer was known. Accuracy ranged from 100 per cent to zero, with one at 90 per cent, one at 80 per cent and one at 60 per cent.

Education of the mother was correlated with two other socioeconomic status indices, both containing family income and one containing occupation of male head of household. Education of the mother was the most significant socioeconomic index factor correlation in four of the six cognitive areas. It was also the most significant overall when correlated with the knowledge index.

Analysis of variance was performed on variables considered to vary with the socioeconomic status and knowledge. Those considered to vary with socioeconomic status were 1) group membership type, and 2) participation on courses or programs. Those considered to vary with the knowledge index were 1) primitive and folk medical practices (beliefs, home remedies used and discontinued and customs), and 2) actions of respondents and perceived actions of others where
knowledge of effective home therapy for fever is concerned.

Group membership types possible were the family practice program at Earl K. Long Hospital, the nutrition program sponsored by Cooperative Extension Service and it was possible for a respondent to be a member of neither. No respondents were participants in the nutrition program. No significance was found between the mean socioeconomic index scores of the other two groups.

Participation in courses or programs was found to be significant by number of adults participating and number and type of course or program in which they participated. The most significant type of program in numbers reported was in the area of economic skills, although 80 per cent of the respondents and 56 per cent of the spouses reported themselves retired, while 83 per cent of the respondents and 55 per cent of the spouses were between 18 and 65 years of age.

Respondents were mothers of 227 families living in low-income neighborhoods in East and West Baton Rouge Parishes in Louisiana in 1972. They became respondents on the basis of two criteria 1) living in low-income neighborhoods, and 2) volunteering to participate. On the basis of these criteria four aides selected a minimum of 50 families.

The respondents were predominately black, females who had completed ninth grade, and were living on an average annual income of $2249.50. The mean socioeconomic status index value, using
education of mother and family income as indicators, was 43.78, within a range of 29.70 to 85.90. The mean knowledge index score, using maintenance and general information, was 23.63, within a range of 0 to 40.

Specifically as the findings are related to the hypotheses:

There was no significant correlation between the knowledge index or the socioeconomic index and the education of the mother. The first and second hypotheses were not rejected.

There was no significant variance between the mean socioeconomic index scores variance and variance of group membership type of consumers in the study. The third null hypothesis was not rejected.

There was a significant variance at the .001 level between the mean socioeconomic index scores and the number of adults participating in courses and the number and type in which they participated. The null hypotheses, four, five, and six were rejected. There was a significant variance between the mean socioeconomic index scores and participation in courses or programs by number of adults, number of programs and type of program.

There was no significant variance between the mean knowledge index scores of consumers in the study and beliefs, home remedies used and discontinued and actions and perceived actions. Hypotheses seven, eight, nine and eleven were not rejected.

There was significant variance at the .001 level of significance between the mean knowledge index and scores and customs practiced by consumers in the study. The null hypothesis, hypothesis ten was rejected.

There was no significant correlation between the socioeconomic indices and the knowledge index or between the socioeconomic indices and the cognition index. Hypotheses twelve and thirteen were not rejected.

There was a significant correlation between the maintenance index and the cognition index scores. Hypothesis fourteen was rejected.
CONCLUSIONS AND RECOMMENDATIONS

Respondent Characteristics

The conclusions were interpreted within the framework of the characteristics of the respondents. They were predominately black, females who lived in low-income neighborhoods on an average annual income of less than $3,000.00 and who completed, on an average, ninth grade. While these are significant factors in the conclusions to be made, one, probably more significant is the sampling procedure. They were selected by quota sampling; and they volunteered. Because of the type of sampling, conclusions can not be drawn which can be generalized to the population, such as would be possible had the sampling been random. These limitations apply to all of the findings related to the hypotheses. However, the limitations do not apply to the larger concepts of role structure, knowledge index and cognitive index. Although the limitations do apply to the particular findings in the area of role structure knowledge index and cognitive index.

Consumer Role (Knowledge Index, Cognitive Index)

The role structure of contemporary consumers was examined using four models. The role structure of consumers prepared to function within the proposed changes was examined by specialists and outlined in the form of behaviors which became part of the instrument used in the study. It was concluded that the role structure of consumers functioning in the projected changed role was described
in terms of the behaviors involved.

It was concluded that both the contemporary and the projected changed role structure were described and that the knowledge index and the cognitive index were devised. It was possible to study the contemporary role structure of consumers of health care using four models described in the literature. On the basis of information provided by specialists and the discipline, the role structure of the projected change in consumer activity was outlined. It was outlined in terms of behaviors. These behaviors became items on the instrument. The items can be divided into three types of information, 1) maintenance, 2) general and 3) cognitive. The consumer role was seen in terms of behaviors in those areas. The maintenance and general information became the knowledge index. The cognitive information became the cognitive index. It was possible to test consumers concerning their ability to function within the changed role structure of consumers of health care which was described by the specialists and found in the literature, by using the instrument containing these items.

To elaborate further, when speaking of the role structure changes, one is also speaking of the items contained in the knowledge index and items contained in the cognitive index. Therefore, in describing the role structure changes, these indices are also being described.
In essence, what was described was a model for consumers who are participants in their own health care. A model, then, for the proposed role structure change of consumers of health care includes maintenance and general information and cognition. Consumers functioning in the proposed role structure change are seen to have basic knowledges of 1) maintenance, 2) general information to revert minor illness and emergency situations back to a state of health, and 3) cognition at all levels in the hierarchy in common areas in which consumers are required to function frequently. The maintenance section of the knowledge index has potential for use. The general information section can be used with addition and/or deletion denoted by consumer need.

Cognition concepts can be developed for all health care concepts and need to be developed, especially for the basic ones, to help planners and educators to develop programs and curriculum, by assessing the need of consumers and to help the consumers, eventually to assess their own needs. The possibility exists that programmed instructional units could be prepared for consumers to use at their leisure. These could be prepared for adult education programs and for formal educational programs especially below the ninth grade.

Consumers functioning in the proposed role structure change with general information will have general knowledge of personal
health, personal hygiene, nutrition and mental health. They will recognize danger signs which indicate a need for professional provider help.

They will function at higher levels in the hierarchy of cognition in meeting emergency situations such as burns, cuts, choking and bruises, in caring for family members with pain, fever, rashes, nausea, diarrhea and ear ache, and will know what information to have when they contact the provider for medical help.

This model serves this society generally. Specifically, it does not serve all subcultures equally. Population composition has an effect. Where a large number of children are found in the population, cognition of parasites and ear ache would be important basic concepts in health care and might be added. Where a large number of aged persons are found in the population, nutrition, rheumatism and arthritis would be important. Cognition of hepatitis, in populations where drug use is known to be high, and cognition of new immunizations as these are developed to make consumers aware that these concepts are now to be incorporated into the role structure. Cognition of climate, topography and geographical location affect items to be included. Chinese (or Asiatic) Liver Fluke Disease in Southeast China, Taiwan, South Korea, Hawaii, Thailand, Egypt and Russia, and in some parts of the United States is important. Cognition of coccidioidomycosis in arid and semiarid areas in the
United States from California to Texas also in Argentina, Mexico and Russia. In areas where the birth rate is high, cognition of baby and child care is important. The possibilities are seen as limitless.

Too, cognitive items should be derivable in the language of the consumer wherever he might be. Because of the nature of the concepts, generalizability is seen as being extremely good. However, in order for the maintenance index and the cognitive scores to be generalized, further work needs to be done and additions will need to be made to suit the population, the climate, topography, geographical location and the availability of resources. One exception to this last limit is, perhaps, to use the tools as substantiation for needed facilities. For example, if x-ray facilities are needed it would be possible to determine the number of people who need x-rays and perhaps substantiate the need for a mobile unit or permanent facility in the area by using this model. However, caution is indicated, for too frequently consumers are "polled and promised" by well meaning persons who can not for various valid reasons deliver the promises, facilities or services. Consumers object to this, and may manifest this objection by retreating from courses or programs in the area of health. If consumers are approached using the tool, it is hoped that it will be to improve the general welfare of the consumers.
The tool has implications for the education of professional and sub-professional providers. The maintenance index concisely defines the basic knowledges needed to function in a health care situation where maintenance is primary.

The relative ease of assessment and prediction makes the tool particularly worth further development. The accuracy of prediction is considerable, however, needs further development.

The value of an informal educational program in health care is highlighted in the findings on the education of the mother, and participation of adults in courses and programs. The average formal educational level of the mother was 9 years. Plans for teaching health concepts in grades 1-8 should be strongly considered. Too, adult educational programs might be used and meet with success.

The conceptual framework has been developed and manifested in the tool to determine consumer need in the area of basic health concepts. Consumers are demonstrating an interest in informal educational activities and they are doing many things concerning health, primitive, folk and scientific practices. A course or program in health care concepts planned on the basis of the tool developed could assure consumers more optimum health care and the ability to give better health care to their families.
Socioeconomic

A correlation between the knowledge index or the cognitive index and the education of the mother was not found to exist in this study, nor was a correlation found to exist between the socioeconomic indicators studied (occupation of male head of house, family income and education of the mother), and the knowledge index or the cognitive index or group membership type (family practice or not family practice). It was concluded that the variables studied did not aid in determining consumer maintenance, general information or cognition of basic health concepts for consumers in the study.

Much stress is placed on determining socioeconomic factors in many areas of social function, voting, housing, education and occupational patterns to name some. Findings in this study raise the question of the value of the socioeconomic indicators used in determining maintenance health care patterns when consumers are predominately black, females living in low-income neighborhoods, with an average income under $3,000.00 who have completed an average of nine grades of formal education. Investigators mentioned in the study found socioeconomic variables related to health, and preventive health. The type of respondent in this study may have given results which would not exist in the population mainly because this respondent,
as a criteria for participation, volunteered. Therefore, for this type of respondent, other socioeconomic variables may be better indicators of consumer function in the changed role model or others may be needed in the area of health maintenance.

A study of volunteering and volunteerism might be more fruitful as a social indicator which relates to health care where maintenance is primary. Also factors leading to volunteering need to be researched.

While generalizations were limited to the sample, such characteristics as those found in this sample may be common to other groups with which Cooperative Extension is currently working and it may be found that some generalizability is possible to such groups.

No statistical significance was found to exist between the socioeconomic mean scores of consumers in the study and group participation. It was concluded that there was no socioeconomic difference between participants in the family practice program and those not participating in the program.

Statistical significance was found between the mean socioeconomic index scores and adult participation in courses or programs. It was concluded that a relationship exists between the index mean and continued informal education of consumers in the study. The areas studied were number of adults, number and type of program. Threaded through most of the conclusions is the concept of volunteerism.
Adult participation in courses and programs was no exception. The socioeconomic index mean score increased with number of adults participating and number of courses or programs in which they participated. However, as the socioeconomic index scores did not relate statistically to the knowledge or cognition indices, before participation can be considered significant for health practices when maintenance is primary it needs to be investigated in this area.

Program participation was found to be highly significant as it related to the number of adults participating, the number of courses or programs in which they are enrolled and the type of program in which they enroll. There was a tendency for the socioeconomic status index to increase with reported increased activity on the part of the respondent. Adults in families indicated a high interest in courses and programs, indicating an orientation to continued informal education. However, the highest interest was in courses on employment skills.

Studied along with this hypothesis because of the finding that the greatest interest was in courses or programs offering employment skills was employability. It was noted that 83 per cent of the respondents and 56 per cent of the spouses considered themselves retired while 80 per cent of the respondents and 55 per cent of the spouses were between 18 and 65. It was concluded that some of the consumers taking courses to improve employment skills consider themselves retired.
To elaborate, an interesting note, though is the fact that so many respondents reported themselves and/or their spouses as retired. If the term is defined in the usual sense, economic participation, the question might be asked why do so many take courses or programs related to employment skills? Research is indicated. It could be that some courses for employment offer salaries during the course. Studies of the sustained employment rate of participants following such programs might shed some light on this area. A more simple explanation might be that "retired" is defined differently. It may mean, for some, not working. For example, a housewife is not, in the larger culture, considered retired at age 20, yet many of the respondents and their spouses were in that age range. The possibility may exist that the definition must be made in terms of the respondents. This would need to be researched. The high interest manifested in courses and programs indicates that many families are approachable in groups. This is usually an indication among low-income neighborhood residents that change can take place. Once respondents move out of the one to one interaction situation, a giant step has been made by them in the direction of manifesting a desire to learn. The possibility can be investigated.

No statistically significant correlation was found to exist between the socioeconomic status indices and the knowledge index or the cognition index. It was concluded that the socioeconomic factors
used in the study (occupation of the male head of house, family income and education of the mother) were not significantly related to the knowledge index (maintenance and general information) or the cognition index (on temperature) to consider combining the socioeconomic index with the knowledge index to form a maintenance index.

Knowledge

No significant variance was found between knowledge index mean scores and beliefs held or home remedies used or discontinued. Statistically, it was concluded that if or not consumers hold primitive beliefs or practice folk medicine that there is no difference in their knowledge of health maintenance. Also, it was shown that as the number of practices increased, the knowledge mean score had a tendency to increase. Again, volunteerism needs to be considered as the tendency for an increase in these practices, which are considered unrelated to scientific medicine, to be related to an increase in the knowledge score raises the question of the affect of activity in one area on activity in all areas.

To elaborate, primitive and folk practices were studied by examining beliefs held and home remedies used and discontinued. Responses to beliefs were indicative of primitive medical practices. Responses to the use and discontinued use of home remedies were indicative of folk medical practices. No attempt was made to
determine the foundation of the beliefs, or if in fact there was merit to them. Further study is suggested here. The tendency for the knowledge index score to increase as the number of practices increased was not explained in the data, nor was it determined if this involved the same persons. This was a limitation in the study. Of interest was the fact that there was not an inverse relationship between primitive and folk practices and the mean knowledge index score. On the basis of the findings, it might be concluded that persons who "volunteer" might be good candidates for health education programs.

It is possible to anticipate some resistance to changing beliefs and use of home remedies when the status of the individual might be affected as change is made. For example, the person who uses beliefs and home remedies on behalf of others might be less willing to give up the prestige derived from the knowledge than one who holds no such beliefs or uses no home remedies. It is not implied that the beliefs held, or home remedies used were accurately reported nor that when a correct response was given that the reporting was correct. This is implication for further research.

Beliefs and home remedies might be examined scientifically. Knowledge in the area of drugs, particularly, was derived from folk medical practices and from some once considered primitive. Knowledge in the use of drugs was derived from folk medicine. Prior to the advent of synthetic drugs, herbs, leaves and roots were the main source of
medication administered in the scientific subculture. Which herbs, leaves and roots to use, how much to compound and when to administer them were determined on the basis of the scientific approach.

Moving, for a moment, to the larger concept of global health care, and relating to the idea just discussed primitive and folk medical practices have as their basis the same philosophical orientation as eastern medicine, while scientific medicine is western in philosophical orientation. In the eastern philosophy, what works is used. In the western philosophy, even though it works, it is not used until it is understood. Perhaps research needs to be done in this area.

There was statistical significance between the number of customs practiced and the mean knowledge index score of consumers in the study. It was concluded that the practice of customs and health knowledge, when the orientation is primarily maintenance, are related.

To elaborate, customs reported were in the area of scientific medicine. Included were practices in the areas of nutrition, hygiene and health care. Accuracy or reporting or correctness of response was not evaluated as part of the study. This is seen as a limitation and further study is suggested.

No statistical difference was found to exist between the actions of consumers and the perceived actions of others and knowledge index mean scores. It was concluded that consumers in the study do what they think others do and think others do what they do. An
interpretation of this which could have implications for program planning and curriculum development is that of making consumers aware of practices other than those known to them. As 225 of the 227 responded that they perceive others as doing what they do, knowing what the respondents do has strong implications for development and formulation of objectives of courses and programs. If consumers believe that others do what they do, consumer scope of knowledge is limited to what they know. Health education programs could enlarge this scope. A situation in which sharing would be possible might help all consumers to learn more. Having the learning situation structured so that the shared knowledges are the basis for the learning situation might encourage more to discuss what they think others know and do.

It was found that consumers in the study who scored higher in health care knowledges and cognition tended to participate in more adult courses and programs and to practice more health customs. It was found that no significant relationship existed between the socioeconomic index factors used, group type participation, and primitive and folk health practices.

It was concluded that consumers who participate in courses or programs have more health maintenance knowledge and cognition, than those who do not participate in courses or programs.

It was further concluded that the number of customs reported was more significantly related to maintenance and general knowledge than the number of beliefs or home remedies.
In summary it was recommended that:

1. The tool be refined and tested further in order to develop it and to enable providers to develop standardized scores. This would make assessment easier and save provider time in planning. In addition, better assessment of need than currently exists and enabling the provider to select more pertinent objectives for courses or programs is seen as being of value. The tool could be used to evaluate the objectives selected.

2. The maintenance information section be considered to have universal application. It contains health maintenance information basic to health anywhere in the world. This does not mean that these are the basic levels of function of consumers. It does mean that in order to conform to the changed role structure, these are the basic levels of function.

3. The general information section be considered to have relative universal applicability but needs to be modified to suit the particular needs of consumers in the course or program.

4. The cognition index be developed in areas other than temperature. The temperature cognition index needs to be refined.

5. Programmed instructional units be prepared for consumers and providers to use, especially in the basic concepts, on the basis of identified behaviors in the projected consumer role structure.

6. Health concepts be taught in elementary school.
7. Health courses and programs be taught wherever other courses or programs are taught to similar groups.

8. Socioeconomic factors other than those in the study be considered when programs or courses are being planned for similar respondents.

9. Volunteering be studied together with related factors such as motivation, economic freedom, and loneliness.

10. A definition of retired be studied.

11. Use of skills learned in courses or programs of employment skills be studied.

12. Beliefs, home remedies, and customs be studied in depth to learn if 1) the same consumers practice in all areas, 2) other practices are not reported, 3) which would submit to scientific analysis, 4) is there a different philosophical orientation of consumers who engage in different practices, beliefs, home remedies and customs, and 5) what is the lay network like in the areas of practice, who does what for whom, who recommends practices and what prestige factors are involved, are some of the areas which could submit to investigation.
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PERIODICALS


UNPUBLISHED MATERIAL


APPENDIX A

INSTRUMENT
CONSUMER HEALTH INFORMATION PROGRAM

Benchmark Study Part 1

Identification No. ______________ (Family Number) ________

Group No. _____________________________

1. Family Practice Unit
2. Nutrition Program
3. Neither 1 nor 2
5. Sex (interviewers observation)
   1. Male
   2. Female

6. Ethnic origin
   1. Black
   2. White

7-8. In what year were you born?

Occupation

9-10. Respondent (Specify)

11-12. Spouse (Specify)
   (Head of household if other than respondent, male or female, like Grandmother, Aunt, Uncle)

Education

(Highest grade completed in school)

13-14. Respondent

15-16. Spouse

17. List any courses or programs any adult member of the family have completed.

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<tr>
<th>Family Member</th>
<th>Course or Program</th>
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18-19. What year was your spouse (or head of household) born?

20-21. What is your family income for a year (all money anyone in household earns)?
2. Do you have a regular or family doctor?

3. Do you take exercises regularly?

16. Do you keep records of your family's health and illnesses?

18. Do you have a thermometer?

19. Do you have a medicine cabinet?

20. Do you have any medication?

21. Do you have a regular or family doctor?

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118. Do you have a regular or family doctor?

119. Do you have a regular or family doctor?

120. Do you have a regular or family doctor?
3. Now I am going to ask you some things some people say and ask if you agree or not.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>A temperature of 98.6 is normal.</td>
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<tr>
<td>2.</td>
<td>A temperature of 100.0 is called fever.</td>
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<td>3.</td>
<td>A person's body has ways to keep him well and free of fever.</td>
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<td>4.</td>
<td>Fever can be an indication of infection in the body.</td>
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<td>5.</td>
<td>When a person has fever, aspirin can be given to him to bring it down.</td>
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<td>6.</td>
<td>When a person has a little fever, wiping him with a cool cloth can make him comfortable.</td>
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<td>7.</td>
<td>Fever can cause a person to become sick to his stomach and throw up.</td>
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<td>8.</td>
<td>Fever can make a person sleepy.</td>
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<td>9.</td>
<td>Fever does not usually keep me from doing what I usually do.</td>
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<td>10.</td>
<td>When a person has fever, rubbing with alcohol can help to bring it down.</td>
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<td>11.</td>
<td>Fever can be caused by a number of things.</td>
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<td>12.</td>
<td>If fever goes high or lasts long, it is a good idea to call a doctor.</td>
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<tr>
<td>13.</td>
<td>A person's temperature is controlled by his body to help him fight disease.</td>
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</table>
4. Now I would like to ask you some general questions about other health areas.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
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</thead>
<tbody>
<tr>
<td>1. Cuts or abrasions should be washed with running water.</td>
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<tr>
<td>2. Anybody can use a tourniquet to stop bleeding.</td>
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<td>3. Some people call unconsciousness &quot;falling out.&quot;</td>
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<td>4. Burns are caused by heat and by chemicals.</td>
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<tr>
<td>5. A person can drown if less than one glass of water gets into his lungs.</td>
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<tr>
<td>6. When something gets caught in a person's throat and he can't breathe, people say that he is choking.</td>
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<td>7. When a person has diarrhea his bowels are moving more than they usually do.</td>
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<td>8. Pain is one of the body's ways of letting a person know that something is wrong.</td>
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<td>9. Most people have a cough.</td>
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<td>10. A rash is a minor irritation and will go away after a while.</td>
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<td>11. Food particles left in the mouth and on the teeth cause cavities.</td>
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<td>12. Starch, like Arg-O, is a basic food.</td>
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<tr>
<td>13. A person should wash his hands before he eats or handles food.</td>
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<td>14. A splint keeps an arm or leg stiff and helps it to heal.</td>
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<td>15. Cleaning fluids are poisons.</td>
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<td>16. An alcoholic is a person who cannot do what he usually does when he drinks.</td>
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<td>17. Coffee and tea are drugs.</td>
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<tr>
<td>18. Sleeping pills and diet pills are drugs.</td>
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<tr>
<td>19. Older people in the home need to have something to do to feel part of the family.</td>
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<tr>
<td>20. A chronic disease is one that will never go away completely.</td>
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<tr>
<td>21. A terminal illness is one that causes the person to die.</td>
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<td>22. Infants and small children should have an adult with them all of the time.</td>
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</tbody>
</table>
5. I would like to ask some very general questions. Some of them may sound really simple to you, but please answer them.

1. What is a normal temperature?

2. If you took a temperature and the thermometer looked like this (hold up picture of thermometer registering 101°F), would you know if the person had or did not have fever?
   - Yes
   - No

3. What is the temperature on the thermometer? 
   - Correct
   - Incorrect

4. How many degrees of fever would the person have? 
   - Correct
   - Incorrect

5. Fever can cause other symptoms, other things to be wrong, can you tell me some of them?

6. What do you do when a person has fever?

7. What do you think a person with fever should do?

8. What would make you decide to go to the doctor if you had fever?
6. Sometimes what we believe makes us decide what to do when we think about being well and being sick. For instance, some people say "a copper bracelet will get rid of sore joints," or "you should wear a black string around your neck." Does your family have sayings like these?

7. A custom is a habit or something people usually do. Some families have a custom of seeing a doctor every year if they are sick or not. This is a medical custom. Would you tell me some customs related to health which your family has?

8. Most families use home remedies when they are sick or hurt. Like making a tonic. What home remedies does your family use?

<table>
<thead>
<tr>
<th>Remedy</th>
<th>For What</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Are there any home remedies you stopped using because they didn't work? (If no, go to next page. If yes, ask next question.) Can you tell me what they were?
Table 16. Analysis of Variance of Respondents' Perception of Their Actions in Relation to the Actions of Others in Regard to Fever.

<table>
<thead>
<tr>
<th>Courses of Action</th>
<th>F</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydortherapy</td>
<td>0.489</td>
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<tr>
<td>Drugs</td>
<td>0.954</td>
<td>1,225</td>
<td>NS</td>
</tr>
<tr>
<td>Fluids and electrolytes</td>
<td>0.954</td>
<td>1,225</td>
<td>NS</td>
</tr>
<tr>
<td>Rest</td>
<td>0.954</td>
<td>1,225</td>
<td>NS</td>
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<tr>
<td>Isolation</td>
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<td>NS</td>
</tr>
<tr>
<td>Record</td>
<td>0.954</td>
<td>1,225</td>
<td>NS</td>
</tr>
<tr>
<td>See Doctor**</td>
<td>3.144</td>
<td>1,225</td>
<td>NS</td>
</tr>
</tbody>
</table>

*Respondents were a sample of mothers of families living in low-income neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972.

**This category was of note: 127 of the respondents saw the doctor when the fever was prolonged or high, when they did not know the cause or knew the cause and knew it to be a reason for seeing a doctor and if medicine did not help. 100 of the respondents saw the doctor to keep others from getting fever, if they felt bad.
APPENDIX C

COGNITION
Figure 1.

Knowledge

1. A temperature of 98.6 is normal.
2. A temperature of 100.0 is called fever.
3. What is a normal temperature.

Comprehension

1. A person's body has ways to keep him well and free of fever.
2. Fever can be an indication of infection in the body.
3. If you took a temperature and the thermometer looked like this (hold up a picture of thermometer registering 101°) would you know if the person had or did not have fever?

Application

1. Fever can cause a person to become sick to his stomach and throw up.
2. Fever can make a person sleepy.
3. What is the temperature on the thermometer?

Analysis

1. Fever does not usually keep me from doing what I usually do.
2. Fever can be caused by a number of things.
3. How many degrees of fever would the person have?

Synthesis

1. When a person has fever, rubbing with alcohol can help to bring it down.
2. When a person has fever, aspirin can be given to him to bring it down.
3. When a person has a little fever, wiping him with a cool cloth can make him comfortable.
4. overt/covert
5. related/unrelated
Evaluation

1. If fever goes high or lasts long, it is a good idea to call a doctor.
2. A person's temperature is controlled by his body to help him fight disease.
3. What would make you decide to go to the doctor if you had fever?

- Appraise situation
- Explain
- Evaluates data
APPENDIX D

REGRESSION FORMULA
There are three steps to arriving at the predicted score \( (C) \) using the regression equation:

1. The standard deviation of the cognition scores at a given level is divided by the standard deviation of the knowledge index. This is then multiplied by the correlation coefficient of cognition with knowledge. The figure derived is the slope of the regression line \((b)\). The statistical expression is:
   \[
   b = r_{ck} \times \frac{\sigma_C}{\sigma_X}
   \]

2. The figure derived for the slope of the regression line \((b)\) is multiplied by the knowledge mean score. The product is subtracted from the mean of the cognition scores. The figure derived is the cognition intercept \((b_0)\). The statistical expression is:
   \[
   b_0 = \bar{C} - b(\bar{K})
   \]

3. The third and last step is to multiply the slope \((b)\) with the individual consumer score and add the product to the cognition intercept \((b_0)\), derived in step 2. The statistical expression for the predicted cognition score is:
   \[
   \hat{C} = b_0 + b(C\text{ score})
   \]

To take an example, suppose the instrument had been administered to a group of local consumers and it was found that:

- The mean of the cognition scores was 1.80
- The mean of the knowledge index was 23.63
- The correlation of the cognition with the knowledge index was 0.4345
- The standard deviation of the analysis level of cognition was 0.4033
Suppose that it was desired to predict the cognitive ability of a consumer at the fourth level analysis. This consumer scored 11 on the knowledge index and it was determined that:

The standard deviation of the knowledge index was 3.83

The computation would be:

\[ b = r_{ck} \times \frac{\bar{C}}{\sigma_k} \quad \text{or} \quad b = 0.4345 \times \frac{0.4033}{3.83} = 0.0341 \]

\[ b_o = \bar{C} - b (K) \quad \text{or} \quad b_o = 1.80 - 0.0341 (23.63) = 0.3308 \]

\[ C = b_o + b (C_{score}) \quad \text{or} \]

\[ C = 0.0733 + 0.1072 (11) = 0.7059 \]

The 0.7059 is the consumer score within a range of 0-3. This gives the planner an indication of the cognitive need of the consumer at the analysis level of cognition.

Using this formula, expected scores were derived for cognition index scores of eleven 11 (Table 17). The actual scores of ten consumers scoring eleven were randomly selected from the study. Of the six cognitive areas, one was 100 per cent, one was 90 per cent, one was 60 per cent and one was 80 per cent accurate in predicting the actual score from the randomly selected group within the sample. This elaboration does not constitute a test for validity. This is no verification, no test of either reliability or validity of the tool. Validity can only be established as the tool is used and should it prove useful, standardization would enhance predictability and would
Table 17. Predicted and Actual Scores of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes Louisiana, 1972, Who Scored 11 on the Cognitive Index* using the Regression Formula: \( b = r_{ck} \times C \); \( b_o = C - b (K) \); \( C = b_o + bK \)

<table>
<thead>
<tr>
<th>Cognition Scores</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Average</th>
<th>Predicted**</th>
<th>Times Predicted Score Appeared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge (1)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Comprehension (2)</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Application (3)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>9</td>
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<tr>
<td>Analysis (4)</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
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<td>Syntheses (5)</td>
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<td>4</td>
<td>3</td>
<td>2</td>
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<td>4</td>
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<td>4</td>
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<td>0</td>
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<tr>
<td>Evaluation (6)</td>
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<td>2</td>
<td>3</td>
<td>2</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>8</td>
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</table>

**Predicted Cognition Scores

\[ C_1 = 0.4462 = 0 \]
\[ C_2 = 0.8490 = 1 \]
\[ C_3 = 1.5069 = 2 \]
\[ C_4 = 0.7047 = 1 \]
\[ C_5 = 1.0911 = 1 \]
\[ C_6 = 1.7304 = 2 \]

*An index derived from responses to questions related to temperature using the six cognitive levels described by Bloom in *Taxonomy of Educational Objectives Handbook I: Cognitive Domain.*
also make the tool easier to score. If the tool could be developed to the point of standardization, it would be possible for a provider to administer the questionnaire, score it and refer to a table for predicted scores.

Predicted scores when derived for all possible knowledge scores 0-40 for each cognitive level 1-6, knowledge comprehension, application, analyses, synthesis and evaluation (Figure 5).
<table>
<thead>
<tr>
<th>C_1</th>
<th>C_2</th>
<th>C_3</th>
<th>C_4</th>
<th>C_5</th>
<th>C_6</th>
<th>C_{total}</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>-0.6258</td>
<td>0.0490</td>
<td>1.0919</td>
<td>0.3627</td>
<td>1.0551</td>
<td>1.2204</td>
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<tr>
<td>2.</td>
<td>-0.5186</td>
<td>0.1290</td>
<td>1.1334</td>
<td>0.3969</td>
<td>1.0387</td>
<td>1.2714</td>
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<td>1.0623</td>
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<td>4.</td>
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<td>0.4653</td>
<td>1.0659</td>
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<td>0.4490</td>
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</tbody>
</table>

C_1 = Knowledge  
C_3 = Application  
C_5 = Synthesis  
C_2 = Comprehension  
C_4 = Analysis  
C_6 = Evaluation  

Figure 5. Predicted Scores for all Possible Knowledge Index Scores for Each of Six Cognition Areas and a Total Cognition Score for a Sample of Mothers of Families Living in Low-Income Neighborhoods in East and West Baton Rouge Parishes in Louisiana, 1972.
APPENDIX E

SHORT FORM QUESTIONNAIRE
MAINTENANCE INDEX

Maintenance Information

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<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>Column(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Identification Number</td>
<td>☐ ☐ ☐</td>
<td>1-2-3</td>
</tr>
</tbody>
</table>

Please answer the following questions

1. Yes
2. No

- Do you have a family doctor ☐ 4
- Do you have a regular dentist ☐ 5
- Do you have a thermometer ☐ 6
- Do you have medical references ☐ 7
- Do you have a first aid kit ☐ 8
- Do you have a medicine cabinet ☐ 9

Please answer the following questions about your family:

0. Not apply DPT ☐ 10
1. None have Small Pox ☐ 11
2. Some have Polio ☐ 12
3. All have Measles ☐ 13

How often do you think people should do the following?

- Have a physical check-up ☐ 14
- Have a dental check-up ☐ 15
- Have a chest x-ray ☐ 16
- Have a TB test ☐ 17
## General Information

<table>
<thead>
<tr>
<th>Item</th>
<th>Code Agree/Disagree</th>
<th>Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cuts or abrasions should be washed with running water.</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>2. Anyone can use a tourniquet to stop bleeding.</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>3. Some people call unconsciousness &quot;falling out.&quot;</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>4. Burns are caused by heat and chemicals.</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>5. A person can drown if less than a glass of water gets into his lungs.</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>6. When something gets caught in a person's throat, people say he is choking.</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>7. When a person has diarrhea his bowels are moving more than they usually do.</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>8. Pain is one of the body's ways of letting a person know that something is wrong.</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>9. Most people have a cough.</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>10. A rash is a minor irritation and will go away after a while.</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>11. Food particles left in the mouth and on the teeth cause cavities.</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>12. Starch, like Argo, is a basic food.</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>13. A person should wash his hands before he eats or handles food.</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>14. A splint keeps an arm or leg stiff and helps it to heal.</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Item</td>
<td>Code</td>
<td>Column</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
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</tr>
<tr>
<td>15. Cleaning fluids are poisons</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>16. An alcoholic is a person who cannot do what he usually does, when he drinks.</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>17. Coffee and tea are drugs.</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>18. Sleeping pills add diet pills are drugs.</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>19. Older people in the home need to have something to do to feel part of the family.</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>20. A chronic disease is one that will never go away completely.</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>21. A terminal illness is one that causes the person to die.</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>22. Infants and small children should have an adult with them all of the time.</td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>
Cognition Index
for Temperature

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>Column(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A temperature of 98.6 is normal.</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>2. A temperature of 100.0 is called fever.</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>3. A person's body has ways to keep him well and free from fever.</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>4. Fever can be an indication of infection in the body.</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>5. Fever can cause a person to become sick to his stomach and throw up.</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>6. Fever can make a person sleepy.</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>7. Fever does not usually keep me from doing what I usually do.</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>8. Fever can be caused by a number of things.</td>
<td></td>
<td>47</td>
</tr>
<tr>
<td>9. If fever goes high or lasts long, it is a good idea to call a doctor.</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>10. A person's temperature is controlled by his body to help him fight disease.</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>Item</td>
<td>Correct/Incorrect</td>
<td>Column(s)</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1. What is a normal temperature?</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>2. If you took a temperature and the thermometer looked like this . . would you know if the person had or did not have fever?</td>
<td></td>
<td>51</td>
</tr>
<tr>
<td>3. What is the temperature on the thermometer?</td>
<td></td>
<td>52</td>
</tr>
<tr>
<td>4. How many degrees of fever would the person have?</td>
<td></td>
<td>53</td>
</tr>
<tr>
<td>5. Fever can cause other symptoms, other things to be wrong, can you tell me some of them?</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>6. What do you do when a person has fever?</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>7. What do you think a person with fever should do?</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>8. What would make you decide to go to the doctor if you have fever?</td>
<td></td>
<td>57</td>
</tr>
</tbody>
</table>
Adele Rogers Lambert is a registered professional nurse who plans to continue her nursing career as assistant professor on the faculty of Louisiana State University's School of Nursing at the Medical Center in New Orleans.

Mrs. Lambert first joined the LSU nursing faculty in 1972 as a special lecturer in systems of health care. Previously she taught student nurses as instructor (1962-70) for Northwestern State University when the nursing school was affiliated with Baton Rouge General Hospital. She was also an instructor (1958-60) at Our Lady of the Lake Hospital School of Nursing in Baton Rouge.

Earlier nursing experience included hospital duty at staff through administrative levels in positions in Louisiana, Tennessee, North Carolina and Georgia.

A 1947 graduate of Hotel Dieu School of Nursing in New Orleans, Mrs. Lambert received the bachelor of science in nursing in 1959 from Northwestern State University in Natchitoches. She was graduated from Emory University in Atlanta, Georgia, in 1961 with a master's degree in nursing.

Mrs. Lambert first enrolled in the Graduate School of Louisiana State University as a part-time student in 1966 while teaching student nurses in Baton Rouge. She later became interested in Extension Education programs of the Louisiana Cooperative Extension
Service because of their emphasis on teaching in informal situations. Mrs. Lambert has found this applicable in many nurse-patient relationships in hospitals, health agencies and homes. Extension's stress on teaching leadership skills in multidisciplinary teams approaches also interests Mrs. Lambert.

Memberships include the American Nurses Association, the American Sociological Association, American Association of University Women, American Social Workers Association and Phi Lambda Phi, honor society for married women students. Mrs. Lambert was an active supporter of the Boy Scouts of America for nine years, serving three years as a den mother for her son's den pack.

A native of New Orleans, Mrs. Lambert is married to Oliver R. Lambert and is the mother of two children, Roy 21, an LSU student; and Judeth, 9, a fifth-grader.
EXAMINATION AND THESIS REPORT

Candidate: Adele Rogers Lambert

Major Field: Extension Education


Approved:

[Signatures]

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination:

June 26, 1973