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A STUDY
OF INDIVIDUAL HEALTH BELIEFS AND PRACTICES
IN RELATION TO PROPENSITY FOR SELF CARE

A Thesis
presented in partial fulfilment of the requirements
for the degree of Master of Arts in Nursing Studies
at Massey University

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A psychology of entitlement

During the past 10 years, our citizens have adopted an attitude which leading opinion pollsters describe as the "psychology of entitlement". Entitlement, in their terms, has replaced expectation. People used to say, "I expect to be healthy five years from now. I expect to be making \$2000 more a year from now. I expect to be taken care of in my old age." The attitude now is: "I am entitled to good health. I am entitled to more reward for what I do. I'm entitled to a salary that adjusts with the cost of living. Someone else is responsible for taking care of me when I am old." This difference in attitude may seem subtle but its influence is wide-ranging.

People now expect more from social institutions. They've put higher standards on their institutions, and at the same time they have shifted responsibilities from the individual to the institution. This is particularly true in the health care field. Instead of saying, "I should take care of my health," people are now saying, "They should take care of my health."

The emerging issues are what the researchers call "me issues".

A B S T R A C T

In this thesis the concepts of Selfcare and of health, which is the goal of selfcare, are explored in relation to the selfcare nursing model. It is a basic premise of the selfcare model that the client be involved to the fullest possible extent in regaining or developing selfcare skills. The proposition offered in this thesis is that individuals differ with respect to their readiness for such involvement and effort in their own health work, and hence in ability to benefit from the application of the model. The study aimed at developing a means of identifying and predicting these differences.

It was hypothesized that the individual's perceptions and beliefs about health (Health Concept), his attributions about the location of blame for illness (Blame for illness), and the extent to which he perceives himself as having control over the contingencies of his behaviour (Locus of Control) would all systematically influence his readiness to engage in selfcare (Propensity for Selfcare).

A Health Questionnaire designed to obtain data on individual health related beliefs and practices was constructed. This was mailed to a randomly drawn sample of non-academic staff from one university. A combination of univariate and multivariate analyses of the 86 completed questionnaires showed the major variables as described above to be significantly interrelated. The pattern of relationships which emerged between responses to other items in the questionnaire cast further light on the complex determinants of health behaviour. Of particular interest was the suggestion that the manner of perceiving health is a crucial factor.

Use of the principal axes method of factor analysis allowed a shortened version of the original questionnaire to be produced. The profile yielded by scores on this instrument not only describes the client in terms of the four major health related variables identified in the study but can also be used to predict readiness to benefit from a selfcare nursing approach.

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INTRODUCTION AND OVERVIEW

Over the past twenty years a social revolution in personal health care has taken place. This revolution is evident in the social selfcare movement which has as its ethos personal responsibility in health care. The aim of this movement is personal autonomy and the means by which health is secured is personal effort. The three primary components of the social selfcare movement are universal selfcare, involvement in personal and community health-related decision making, and health deviation selfcare. In selfcare the care of the self may be administered either personally or by others, for example by family, friends, or by health professionals such as nurses.

In Orem's (1971) selfcare model for nursing practice the nurse shares in the client's selfcare responsibility and involves the client in health care decision making until such time as the client can resume full responsibility for health on his own behalf. The parameters of the social selfcare model within which the client's selfcare agency can be exercised are broader than those of Orem's nursing selfcare model. In terms of the social selfcare model not only will the client make decisions about personal selfcare but he may also be involved in health-related decision making at the political level. An essential element of social selfcare is that of learning about and/or using resources which can contribute not only to the regaining of health but also to its qualitative and quantitative advancement.

The client may not want to selfcare to the extent that is implicit in either the selfcare nursing model or the social selfcare model, nor may he feel able to cope with demands and expectations which are new to him. This raises the question of the appropriateness and usefulness of the selfcare model of nursing for all clients regardless of their perceptions of both sick-role behaviour and of nursing practice. Smith, Buck, Colligan, Kerndt and Sollie (1980) have demonstrated different perceptions of nursing care by the clients and the nurses in a geriatric selfcare situation,

(with the clients having a better concept of selfcare than the nurses). From a nursing perspective it would be useful to find out if there is some way to assess a client's readiness to benefit from the selfcare approach, either for his nursing care or for his personal health work.

Cromwell, Butterfield, Brayfield and Curry (1977) in their discussion on the management of coronary patients suggest that a clinical judgement may be made regarding the client's perception of agency to achieve outcomes. This judgement is made by discussing with the client what it is that he thinks is in control of his life. The person who perceives that he himself has control over life outcomes is described (using Rotter's 1966 terms) as being internal locus of control, or ILC. Such a person will tend to blame himself for failure to achieve goal directed efforts and will tend to take action to achieve a desired goal. On the other hand a person who is external on locus of control (i.e., ELC) perceives life outcomes to be due more to fate or chance than to personal effort. Locus of control can then be an indicator of client readiness to exercise selfcare agency and also a nursing indicator for differential treatment of ILC and ELC clients.

It is proposed that Cromwell et. al.'s suggestion that selfcare agency be assessed by locus of control orientation can be augmented. Locus of control and preventive health behaviour (i.e., selfcare behaviour) have been found to be associated (e.g., Langlie, 1977). Therefore the current selfcare propensity of a particular client could also be an indicator of readiness for a broader selfcare approach to health care. Preventive health behaviour is also associated with the value that a particular person places on his personal health (Wallston, Wallston, Kaplan and Maides, 1975). Furthermore, selfcare practices are influenced by the manner in which the cause of illness is perceived (Stone, 1979). Therefore not only locus of control but also selfcare propensity, perception of health, and the location of attributed blame for illness could be indicators of readiness for a selfcare approach to health care.

If this is found to be so then it should be possible not only to measure the client's readiness for a selfcare nursing approach but also to assess both the extent to which the nurse can involve the client in personal decision making and responsibility, and the speed with which such a (self-care) program should be negotiated and conducted.

The scope of the social selfcare model is maintenance and advancement of health by the individual. The goal of selfcare nursing is the regaining or sustaining of health by the agency of both nurse and client. The problem is how health, which is the goal of selfcare, is perceived by the person and under what conditions that person would be likely to make use of the selfcare orientation in his or her own health work.

In the following chapters the concepts of selfcare and health are outlined and the individual's role as a self-caring health practitioner is discussed. The construction of a questionnaire designed to elicit information relating to health beliefs and practices is described. Data derived from the administration of this questionnaire were used to test hypothesized relationships between selected variables designated as health related. Further analysis of these data yielded additional information regarding the complexity of individual health behaviour.

In the last phase of the study, some modification of the initial questionnaire was undertaken. This resulted in a potentially more powerful instrument for use in the assessment of individual readiness for a selfcare approach to health care. Practical implications associated with the use of this shorter tool are outlined in the concluding section of the thesis.

To sum up, this present study has a fourfold purpose:

- (i) To provide a description of individual health beliefs and practices,
- (ii) To investigate relationships between these beliefs

- and practices and other selected variables,
- (iii) To evaluate the proposition that selfcare propensity, one of the major variables, is predictable from scores on the other three major variables (Health concept, Locus of Control and Blame for illness),
and,
 - (iv) To refine the Health Questionnaire used for data collection in the present study.

PART ONE

C H A P T E R O N E

SELF CARE - A MODEL FOR HEALTH CAREINTRODUCTION

Selfcare has always been practiced in some form or another but the modern upsurge in selfcare is a product of the 1960s which was the era of participation and anti-élitism (Danaher, 1979). In the past 20 years a revolution has been taking place in the practice of selfcare and is now assuming great importance and causing much interest in the health field. As Williamson and Danaher put it, "Selfcare, by virtue of the fact that it requires a considerable change in both behaviour and responsibility, is more akin to a social movement than to a health strategy" (Williamson and Danaher, 1978; p.135). This is illustrated by the fact that a literature scan undertaken for the Copenhagen Symposium on selfcare revealed an array of purposeful educational programs aimed at strengthening lay health care skills, and also many instructional guides designed to enhance the layperson's functioning in primary care (Levin, Katz and Holst, 1976).

APPROACHES TO SELF CARE

The attempt to define selfcare is no mere semantic exercise but a necessary prerequisite for any useful evaluation of selfcare outcomes (Fonaroff, 1977). Selfcare has been defined as "consumer performance of activities traditionally performed by providers" (Green, Werlin, Schaufli and Avery, 1977; p. 162). Such a definition confines selfcare to activities which have been taken over from practitioners and is inadequate for describing the range of behaviours which belong within the selfcare rubric.

Other writers confine selfcare to "what the individual does, with or without professional assistance, in the maintenance of his or her own health at the primary care level" (Egger and Cullen, 1978; p.34). This use corresponds to Orem's definition of selfcare as being "the practice of activities that individuals personally initiate and perform on their own behalf in maintaining life, health and wellbeing" Orem, 1971; p.13). Although Orem defines selfcare in this way the definition does not encompass the full range of behaviours which she actually includes within selfcare practice, because not only does she distinguish 'universal' from 'health-deviation' selfcare but she also includes knowledge- and resource-seeking and utilization behaviours within selfcare and says that selfcare is performed when it is undertaken for one's dependents as well as for oneself.

Williamson and Danaher (1978) extend the definition given by Egger and Cullen to include disease-prevention as part of health maintenance stating that selfcare is a 'bi-modal phenomenon' comprising responsible self-initiated health maintenance and disease prevention on the one hand and the care of the self in illness on the other. Levin (1976) defined selfcare similarly. Care of the self in illness corresponds to Orem's health-deviation selfcare.

Danaher (1979) gives three connotations to the word 'self' saying that it can refer to the individual, to significant others, and to lay groups. She also says that selfcare is associated with 'non-professional' care but conveys more than 'lay' care. It has, she says, two quite separate strands, one being outside the medical profession (i.e., the self help group movement which rejects current medical practice) and the other within it (i.e., self medication). This distinction is not made by other writers. Danaher conceptualises selfcare in terms of five components (ibid, p.73). She retains Williamson and Danaher's (1978) component of health maintenance and disease prevention as one component, but makes their 'care of the self in illness' become two components namely, use of appropriate medical service and participation in the organization and delivery of health care. These two components which address the aspects of selfcare that focus on consumer participation, (i.e., the use of the health services) were also delineated

as belonging within selfcare by Fry (1973).

In 1978 Levin enlarged his own earlier definition of selfcare (1976, 1977) - which itemised health promotion and prevention and disease detection and treatment - to say that selfcare is the "self-initiated and self-controlled application of knowledge necessary to the promotion of health, reduction of undesired risk, self-diagnosis and treatment of disease, and where appropriate the effective and self-protected use of health and medical resources" (Levin, 1978b: p. 19; ~~emphasis~~ not in the original). Levin uses the term "self-protected use...of resources" because medical services provided by institutions can have iatrogenic as well as positive effects. In this revised definition the inclusion of the two aspects, use of the services and use of an existing knowledge base, picks up several important points made by Orem in 1971. Orem stressed the importance for selfcare of such knowledge seeking activity which would contribute to selfcare learning and the practical application of that which had been learned, and of resource- and assistance-seeking and resource- and assistance-using behaviours.

Most of the above aspects are brought together by Norris who defines selfcare as "those processes that permit people and families to take initiative and responsibility and to function effectively in developing their own potential for health" (Norris, 1979; p.487). Her definition is less precise than that of Levin (1978) but the listing of seven areas of self-care explicitly includes yet another discrete component, namely self help group membership.

A more recent approach to selfcare which appeared subsequent to the design of this present study is presented by Hattings Verschure in his book Changes in caring for Health, (1980). Selfcare is here applied only to care which an individual exercises in relation to his own health needs. When an individual seeks professional assistance with care and applies the advice given the care is called "complementary medical self-care". Selfcare and complementary medical selfcare are also distinguished from cover care. It is in the

area of cover care that Hattinga Verschure makes one additional contribution to the conceptualisation of selfcare. Cover care, which applies to all kinds of needs and demands, is provided by one member of a group to another member of that group. Cover care is based on a feeling of loyalty and on mutual reciprocity, and it is emotionally warm. Cover care is further compartmentalised into homogenous cover care and heterogenous cover care. Homogenous cover care is analogous to self help group activity as previously described - all the group members share a common need. In heterogenous cover care however the members have different needs which are met by mutual complementarity: some members contribute what others lack and receive from others what they themselves need. One example of this is the heterogenous dyad - two disabled persons each with a different functional impairment give mutual assistance so that together they share the attributes of one healthy individual. A further contribution to selfcare conceptualisation which this writer makes is that of programmatic selfcare. This consists of any educative and/or health policy approach which is designed to increase the selfcare competency of a population.

Hattinga Verschure presents the ideal health care culture in terms of a pyramid in which selfcare forms the base and comprises the bulk of health care, cover care accounts for the mid-section, and professional care forms the tip and comprises the smallest part of health care delivery. For the individual experiencing sickness or disease the pyramid is reversed - health care comes primarily through professionals. Health is restored when health care is primarily applied through self care agency.

The components of selfcare used in this present study can be diagrammatically represented as shown on Figure 1 - 1, p. 9. The essence of the selfcare movement is control, responsibility, freedom, expanded options and an improved quality of life (Morris, 1979). Selfcare requires the sort of health citizenship that Ennes describes as follows:

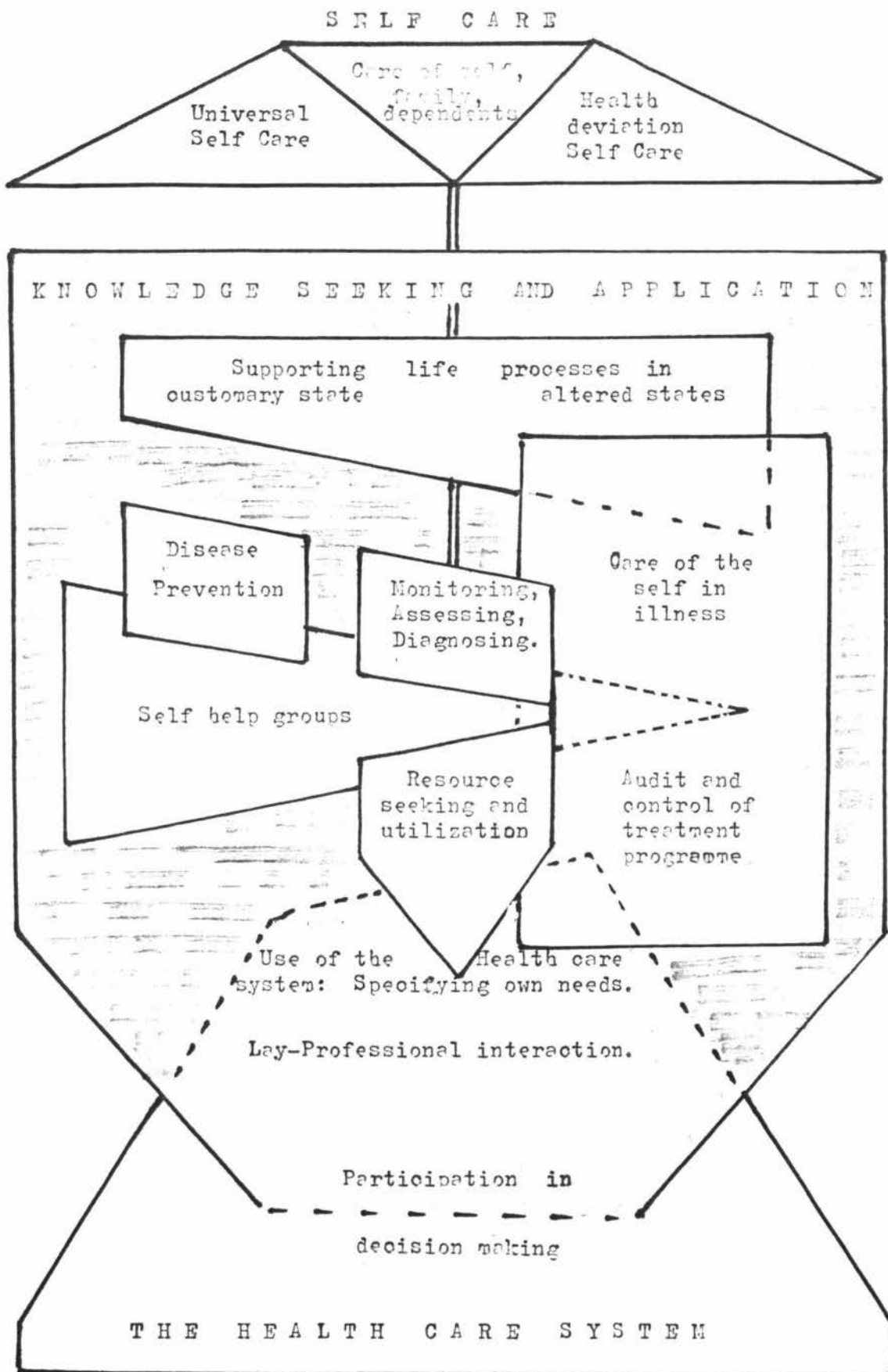


Figure 1 - 1:

A diagrammatic representation of the components of Self Care.

Health citizenship is the responsibility of the individual to know himself and to share his life-style so as to maximise his options for living fully, to utilize health services, both personal and community with optimum efficiency and economy, and to participate constructively in community health planning, priority setting and decision making. Ennes, 1968; p.1812.

To sum up, the aims of selfcare have been stated as consumer based knowledge, skill and responsibility for health care, the appropriate use of health resources, and interdependence in the client-professional relationship (Egger and Cullen, 1978). These aims lead to autonomy which according to Danaher (1979) is the goal of selfcare.

THE IMPETUS FOR SELF CARE

As a social movement the selfcare thrust appeared at first to be anti-professional. It emerged within a new climate of thought about health and illness as a reaction to widespread dissatisfaction with traditional medical care and related prohibitive costs. The drive towards increased selfcare in health parallels similar movements in consumerism (Illich, 1976) as for example in education where there is a lessening dependence on professional tutelage (Levin, 1976). It can be seen as a portent of major social change, even though as a social movement the drive has lacked cohesion. It is ironic that professionals are now seeking to remedy this lack of cohesion within the selfcare movement.

Levin (1976) cites three factors which have contributed to the emergence of selfcare. One is the denprofessionalization era which began in the mid 1960s. Abuses in medical care were being recognised and there was a desire for primary medical care to be demystified. Another was the shift from acute infectious diseases to chronic illness as the immediate focus for health care. The third was the growing cost of health care. To these three factors Levin et al. (1976) add that of the women's movement which focussed attention on the quality of care received by women in a male dominated medical

care system. This was associated with a popular interest in alternative health care methods. Bennett (1980) adds two more factors, namely the need for individuals to be in control of their health and to assume responsibility for meeting their present and potential health needs, and the reduction in available professional services. Egger and Cullen (1978) succinctly sum up the above when they cite as being contributory to the selfcare movement the four factors of increasing costs of health, changing disease patterns, iatrogenesis and dependency as an outcome of professional care. These four factors each deserve some further comment.

Increasing costs of health

Health care delivery is professionally dominated and labour intensive. Advancing technology means that costs of health are escalating (Darby, 1977). In New Zealand in 1976 15% of net government expenditure was devoted to health costs, and most of this was accounted for by hospital costs. Preston (1977) projected that on then current trends the entire GNP would need to be devoted to health delivery in the year 2025! Speaking of the American situation, Giglio, Spears, Rumpf and Eddy (1978) stated that rising costs were not paralleled by any corresponding improvement in the population's health. They warn that "increasing medical expenditures will not lead to improved health" (ibid, p.757). The fact is that in the western world costs have outstripped benefits (Egger and Cullen, 1978). Perhaps this is because the health service, rather than responding to existing health priorities, fosters 'wants' by its fascination with the sophisticated technology which is increasingly becoming available. Another reason is that a different expectation of the health system prevails from former times. Where once 'survival' was the goal of health care, the goal today for many is 'complete wellbeing' (Williamson and Danaher, 1978).

It has been argued that if costs are to be contained the responsibility for personal health must be assumed by the individual himself to a far greater extent. The problem here is one of how best to persuade the lay public about the need and urgency for personal responsibility in the prevention of illhealth and how to enable them to become effective in

their own health care. The economic aspect of health care delivery is becoming so urgent that a new approach to health delivery is arousing interest. This new approach focusses on providing incentives for health maintenance and disincentives for avoidable use of the services, and on improving the health competence of lay persons. For example Egger and Cullen (1978) suggest as an incentive that unused sick leave could be converted to recreation leave and that insurance companies could give a no-claim rebate on medical insurance policies. Stokes (1979) proposes as a disincentive that consumers be required to pay annually the first \$500-\$1000 of health care costs themselves. Merchant (1976) argues a measure of reform, namely that illness or injury attributable to self indulgence should not be a cost to society. To improve the health competence of laypersons Ardell (1977) suggests that persons should be invited to participate in authorised wellness programs at government expense. Hard data are not available about whether lay competence is a cost saving strategy, and in fact it may not prove to be so, say Levin et al (1976).

Faced with the health economy situation writers such as Gartner and Riessman (1976) consistently assert that the current lay impetus of selfcare must be harnessed in order to rescue the health care system from the constraints of the economic situation. The selfcare movement arose as a spontaneous reaction to the health care situation, and it's unique character derives from it's focus on individual responsibility, autonomy and agency. It would be unfortunate if health care planners did the 'right thing' - i.e., foster selfcare,- for the wrong reasons - i.e., to relieve the economic burden. Rather than attempt to expect greater individual selfcare agency, health care delivery would do well to respond to, rather than attempt to take over, the emerging selfcare force; to learn from it rather than try to harness it for the sake of the economic situation. The lesson which the system is beginning to learn is that the system itself needs to make far greater provision for health education, and that professionals within the system need to take initiative for transferring responsibility to the client whenever this is possible and appropriate. On this basis the selfcare thrust can make a contribution to the health care system.

Changing disease patterns

The social impetus for selfcare skills derives from the major shift from acute infectious disease to chronic disease (Levin, 1976). Since the early part of this century disease patterns in the western world (as measured by mortality) have changed from a predominance of diseases that are acute and infectious to those that are chronic and degenerative (Fowles, 1973). Gartner and Riessman (1976) estimate that about 50% of the population now suffers from chronic illness and that such disorders account for 70% of all contacts with health professionals. The main modern medical problems (e.g., lung cancer, motor vehicle accidents, heart disease) have an aetiology which is related to personal behaviour and lifestyle rather than to external/environmental sources less under the person's control. For many persons chronic illness has become a part of 'normal' health and as Brearley, Gibbons, Miles, Topliss and Woods (1978) point out this leads to a re-definition of normal health for such persons.

Medical technology is also responsible for augmenting the category of the chronic sick. Technology in the last 40 years has added years to sick, rather than to healthy, lives and this in turn has resulted in an increase in chronic disease. Gruenberg (1977) calls this increase the indicator of the 'failure of our success'.

The burden posed by such new problems on the health care system can be lessened if individuals will take more responsibility for their own health care. Persons can do this either on their own or with the help of others. In chronic disease the implications for selfcare are obvious. Organized selfcare programs have proved especially effective among sufferers of chronic illness (Stokes, 1979). Diabetes is one illness in which personal selfcare is crucial. The more the chronic sufferer undertakes to manage his own condition, the more will he gain in coping ability and social competence, and the greater will be his contribution to the relief of the burden being placed on the health care system. It must not be forgotten that selfcare at the prodromal or pre-pathology stage (as well as at the later stage) is also a potential area for applying preventive and ameliorative knowledge and techniques (Levin et al, 1976).

Iatrogenesis

Despite the fact that iatrogenesis is cited as one factor which has contributed to the selfcare movement there is comparatively little space given to it by the writers who refer to it in this context. Egger and Cullen (1978) cite McLamb and Huntley (1967) who claim that up to one in five patients admitted to a typical research hospital in the United States of America was suspected of acquiring an iatrogenic disease. More recently Illich (1976) estimated that 3% - 5% of all hospital admissions might be due to the side effects of drugs. There does not appear to be any available figures for hospital admissions which result from self-prescribed drug induced ailments, from reactions to medically prescribed regimens and from the overconsumption of both legal and illegal drugs. It is not difficult for persons working in clinical settings to recall instances of patients being harmed rather than helped by the prescribed medical regimen or intervention. But this aspect of iatrogenesis is a neglected area of research.

Dependency as an outcome of professional care

There has occurred a shift away from the sort of health care which has been provided by professionals who have formed a "medical aristocracy exercising a professional and economic monopoly" (Rush, 1971). This shift is due to the new impetus of selfcare which runs counter to the broad tendencies of society toward increased technological knowledge, expertise and specialization (Levin et al, 1976).

There are three broad trends which account for the rejection of current medical practice (Danaher, 1979). One is that medical practice is disease, rather than health, oriented. (Mathers, 1970, comments that as a medical student he was never allowed to diagnose anyone as healthy but was limited to the traditional cautious statement, 'no apparent disease'.) The second trend noted by Danaher is the perceived stigmatising of women by the medical profession, and the third is the medical profession's monopoly of information relating to the treatment of disease.

Illich is bluntly outspoken about the effects of modern medicine. "The medical establishment" he says "has become a major threat to health because it sponsors sickness and expropriates the potential of persons to deal with their human condition in an autonomous way" (Illich, 1978; p.263). The best conditions for health will only be found when a society will reduce professional intervention to a minimum. Mahler argues that health can only be gained through a demystification of medical technology and he believes that knowledge and skill should go down the professional tree from doctors to nurses to mothers. "It makes good social, economic and professional sense for countries to take the choice of intervention options nearer to the consumer whenever they have the chance" (Mahler, 1978; p.278).

Professional attitude to selfcare

Health professionals both underestimate what patients actually know (Kasl and Cobb, 1966) and also their capacity to understand the details of what is wrong and what must be done, and this misperception erects barriers to communication (Moss, 1973). By and large, professional dominance devalues lay activity in the established domains of professional expertise (Freidson, 1970). Because health intervention is almost exclusively professional, selfcare has been said to be treated with indifference by health professionals (Williamson and Danaher, 1978) and to be perceived by the medical profession as being both ineffectual and dangerous because it delays access to 'proper' treatment (Levin et al., 1976). Yet in a survey of doctors (Dunnell and Cartwright, 1972) half of the doctors surveyed said that a quarter of their consultations were for conditions that people could have treated themselves. Danaher (1979) notes that doctors want to be freed from caring for 'trivial' ailments but O'Grady (1979) warns that some professionals will not want to be deprived of easy pickings from such consultations. By contrast Pratt (1973) claims that health professionals have positive reactions to patient selfcare and the development of formal home care programs.

Much of what has been said of the medical profession can also be said of the nursing profession which historically has shared the same professional orientation to clients.

Professional identity crisis

With the onset of the social movement of selfcare, health professionals are facing an identity crisis (Wilson, 1975). By both education and socialisation doctors and nurses are trained to treat the patient as a passive recipient of care and as one who is not made privy to data which he himself supplies. Health professionals may be expected to resist **the selfcare mode if they perceive that their expertise and exclusiveness** are being invaded and that the professional - patient relationship is being disrupted. Two ways to meet this perceived threat will be for curricula in professional education to reflect new objectives and methods consonant with a 'partnership' attitude in health practitioners, and to supply the means for learning the skills needed by the client for diagnostic and treatment strategies which are appropriate to selfcare (Levin et al., 1976). But to do this will require that health professionals find the goals and methodologies of selfcare to be broadly compatible with their held values, and that they derive role gratification from practising as a facilitator of client autonomy and expertise (Gartner and Reissman, 1976).

In facilitating client autonomy a selfcare educated doctor for example would welcome pregnancy self testing and "will do so unless (he is) on a power trip" (Hefford, 1980). Wilson (1975) notes that it is only recently that doctors have begun to advise businessmen about the role of preventive health behaviour in their lifestyle. The way is certainly open for health professionals to contribute to education for health and autonomy. Health education given by the professional should be focussed on the broad goals of prevention of future disability, adoption of a healthy lifestyle, improvement in mental health via the understanding of interpersonal relationships, and the recognition and prevention of environmental hazards (Butterfield, 1976). Such education is not 'patient'

education but 'selfcare' education for it does not assume sickness nor is it initiated in response to a particular disease. Instead it fosters independence, self-helping capabilities and personal agency (Levin, 1978a).

The decision to transfer clinical skills from the health practitioner to the layperson is not however the exclusive decision of the health professional - even though professionals should not be passive about this transfer - but one which should be shared by the client. What the health professional can do is to carefully assess established clinical practices (from prevention through to rehabilitation) for their essential worth, and establish technical criteria for the selection of clinical skills appropriate for transfer, bearing in mind that no transferred procedure should be dangerous. This requires assessment of the competence of the lay operator of the transferred skill, for there are some skills that could be undertaken by certain persons but not by others.

One notable example of professional cooperation with a self-care active client is that which occurred between N. Cousins and his doctor (Cousins, 1976). In this case the client formulated his own plan of care and was indebted to his doctor who worked as a partner to secure the implementation of the care plan. Cousins writes, "the principal contribution made by my doctor to the taming and possible conquest of my illness was that he encouraged me to believe I was a respected partner with him in the total undertaking" (ibid, p.1463).

According to Mathers (1970) the treatment of a person is a health enhancing activity rather than a disease defeating one. Leading a person back to health means allowing him to be an agent instead of a patient, with the health professional being a participant observer. Health professionals who are interested in selfcare development need to make an objective self-appraisal of their primary care procedures lest they themselves contribute to patient dependency. One way to do this is to make use of a client held record. Such a procedure contributes to the demystification of health care, to client involvement and to health maintenance behaviour (Giglio et al, 1978). Another way is for the health professional to give the sort of health education, outlined by Butterfield (1976) and referred to earlier in the chapter,

which fosters self-reliance and the use of voluntary effort. Although the selfcare movement sprang in part from a reaction to professional mystification, the professional through both responsiveness and leadership can contribute much to the progress of the selfcare approach. These two aspects will now be discussed in more detail.

Professional responsiveness to selfcare

Responsiveness requires first that the health professional respect and foster the client's attempts to assume intelligent agency in his own health care. To do this the health professional will need to meet the challenge to the profession and "step outside the medical model of the health/disease issue and take into consideration the value components of healthward care as perceived by the actors themselves" (Williamson, 1976; p.6). He or she will need also to appreciate that the client may be attempting to 'manage' him, that is, to discuss, assess and make use of the consultative contribution rather than simply acquiesce to 'orders'. The professional may need help in this respect so that rather than react to this new mode of approach (s)he can both respond to it and derive satisfaction from it. Such a response will recognise that a client may be practising 'informed self-treatment' - as in the case of Cousins cited earlier - which is a strategy requiring discussion with, rather than total dependence on, the health professional (Danaher, 1979). There is a need for the lay/professional interface to involve cooperation and delegation as the two actors become interdependent. Williamson and Danaher claim that unless such interdependence can be achieved it will be impossible to incorporate fully disease prevention and health maintenance into selfcare. In fact they go so far as to say that the only hope for selfcare is for it to "grow in a controlled fashion from the base of a different professional/patient relationship from that which is common today ... and which is quite inappropriate for an autonomous and responsible laity" (Williamson and Danaher, 1978; p.186).

Such a renovated dyadic consultative relationship requires that the client be allowed or encouraged to ask questions, and is necessary if the professional approach is oriented toward fostering the client's strengths. The more personal relationship can "set people free from the bonds that diagnosis and treatment have tied around them; it can create a new identity for them by affirming their strengths (Wilson, 1975; p.99). The professional can personally derive satisfaction from an approach in which he learns with the client (Korn, 1964) who in fact may have much to offer the professional. "Their meeting place is more in the nature of a dance together than a traditional consultation" (Wilson, 1975; p.49).

Another way in which the professional can be responsive to the selfcare momentum is to recognise and where possible and appropriate utilize supportive family resources (Otto, 1973). Pratt (1973) points out that the specialised health service has supplanted rather than supplemented the health care-giving capacity of the family. Although by how much, when, where, and how patients and families should be encouraged to achieve more control over their situation is not agreed by the medical profession, individual health practitioners can support the selfcare approach by encouraging supplementary or substitutionary selfcare activity whenever it occurs and is appropriate.

Professional leadership in selfcare

Leadership in preventive activity is the second area in which professionals can assist selfcare to be a useful force. The health professional, having been trained in the cure and care of disease, is not conceptually well equipped to deal with health (Siegel, 1973). Yet Williamson and Danaher (1978) believe that leadership by doctors is a prerequisite for health maintenance even though doctors do not at present have a dominant role in this area. Education for health should not be viewed as an optional extra by care givers but as having a rightful place in whatever care is being given. The professional's own personal preventive health activity can be a lesson in itself. The cigarette-puffing professional is no health model for the health conscious client. On the other hand the client's best impression of creative interpersonal communication may be derived from his experience with his health consultant.

Egger and Cullen (1978) state that the exercise of leadership in developing the selfcare movement "obviously devolves on health departments" because of their commitment to prevention and the professional resources on hand to develop 'packages' for the various content segments. The task of departments is to construct courses, to recruit and train operators, and to make the courses available through general practitioners, they say. They also warn that if traditional medicine and paramedicine fail to meet the public demand for selfcare courses the void will rapidly be filled from fringe health resources.

Other ways that professional leadership can be exercised is by building communication links among selfcare programs, by re-designing or inventing new monitoring, diagnostic and treatment technology - especially hardware - with a view to their selfcare application, and by being available as a professional resource in planning and teaching (provided that the health professional can function within an educational philosophy which is free of manipulation and mythology- Levin, 1976).

Such contributions as the ones suggested carry the danger of professional domination and control of lay initiative. Domination need not occur as long as contributions are made in an "absence of professional chauvinism" (Egger and Cullen, 1978). If health professionals do not pick up the challenge of self-care and work with rather than on it, a new type of health worker may emerge (Levin et al, 1976; Williamson and Danaher, 1978; Levin, 1977).

Keeping in mind the proviso that selfcare can neither be imposed on a population nor required of it, the following comment by Levin et al. (1976) sums up the potential of the selfcare resource for health delivery:

Selfcare is a resource of great promise. Its contribution is not only supplementary to and substitutionary of available health care resources, it is additive to society's ability to overcome many extant barriers to healthcare accessibility, acceptability, quality and accountability. In this sense selfcare must be viewed as the first option with any alternative being supportive and residual. It has always been so. The difference now is that we are able to conceptualise the selfcare option with more clarity than

in the past. We have a new opportunity to consider how to further strengthen the lay contribution and at the same time make more precise and responsible use of the technical and professional expertise in health.

Levin et al, 1976; p. 79.

THE PLACE OF THE SELF CARE CONCEPT IN THE HEALTH CARE SYSTEM

Speaking about the New Zealand situation McKay says that "it is only in comparatively modern times that public responsibility for health has been accepted" (McKay, 1969; p.17). In New Zealand State responsibility for personal medical care began its present pattern with the passing in 1938 of the Social Security Act. Almost immediately the Department of Health began to organize a wide range of health benefits. Today in New Zealand the direction, planning and supervision of Health Services is the responsibility of the Minister of Health. This responsibility for the nation's health is shared between central and local government, private practitioners, paramedical workers, charitable and religious organizations and private citizens, with central government assuming the final responsibility (ibid, p.23). McKay does not overlook that each citizen must personally carry his share of responsibility for his own health because he concludes by saying that the real responsibility for the nation's health rests not primarily on the central government but upon every single member of society. As Fuch has indicated, "the greatest potential for improving health lies in what we do and don't do for ourselves" (Fuchs, 1975; p.151).

Selfcare is a crucial aspect of the health care system (Levin, 1976) and is the biggest part of it (Williamson and Danaher, 1978). As Fry (1973) has pointed out, without selfcare any system of health care would be swamped. Selfcare is an aspect of the healthcare system which tends to be overlooked in health delivery. The unchallenged assumption has been that 'the professional resource is the universal and exclusive resource in health care' - the individual and the family as a lay resource have been overlooked (Levin et al, 1976).

According to Darby (1977) the selfcare resource requires to be integrated into the overall provision of health care.

Danaher (1979) believes that an ideal model of health care will be composed of two separate but interlocking parts, the medical care system run by medical professionals and the self-care system. Both sides of this team will need to know about and integrate each others activities. Milio also believes that selfcare, as an organised community based concept, could become a "model for personal health care which would complement existing medical care" (Milio, 1977; p.139). There is at this time a new public interest in considering purposeful selfcare as an integral component of the healthcare system (Levin, 1978) even though according to Egger and Cullen (1978) there is by contrast little initiative being taken by health professionals for actually bringing selfcare into the health care system.

Effects of selfcare input on the health care system

Development of lay selfcare competence would have a powerful potential for deprofessionalizing the health care system and would challenge the power of health care administration (Norris, 1979). Williamson and Danaher (1978) warn that the medical profession, and more importantly the established health care delivery system, will have to make concessions to the selfcare input if the latter is to be a potent force in the health care system. Increased selfcare competence could free the health care system to be more a resource than a crutch. As has been mentioned earlier in this discussion writers consistently observe that much of what is brought to the doctor's attention is medically trivial (e.g., Milio, 1977) or non-medical in nature (e.g., Brearley et al, 1978) and could be self-treated (e.g., Williamson and Danaher, 1978; Chamberlain and Drui, 1975). Such recourse to the doctor leads to a medicalization of life, to an increasing demand for more doctors and to greater expectations being made of them (Brearley et al, 1978).

Levin et al. (1976) believe that a strengthening in selfcare will represent a thrust towards a more adequate and dignified - and possibly more effective - mode of use of health resources. Usually physicians are the key decision makers in the health service and fill a gatekeeper role (Gertman, 1974; Mushkin, 1974). Rosenstock (1974) in a study of how people use the health care system, and of which people do not use it, discussed ways of persuading people to make use of the system. Knowing

how to use available resources is a part of the selfcare concept. Borkman (1977) notes that some people avoid using the system because their prior experiences with it have been perceived as being unsatisfactory.

In a provocative book, Health is for People, Wilson (1975) reminds us that a health care system reflects that society's idea of health and that medical treatment must not be mistaken for health care. The established health care system is functionally ignorant of 'alternative' sources of health care (Sola, 1972) and is actively disapproving of some of them, e.g., of chiropractors (Reinken, DeLacey and Salmond, 1980) although a change in attitude to chiropractors is currently taking place in New Zealand. Health practitioners in the health care system are scarcely likely to welcome Norris's (1979) suggestion that the acupuncturist, podiatrist, hypnotist and others be welcomed into the health team. Schofield (1969, 1979) would also include the psychologist in the team, and Nightingale (1970) and Lohrisch, Ryan and Rosenbluth (1978) the pharmacist.

By contrast a warning is sounded by Martin who believes that the emphasis on the selfcare aspect of health care and the movement towards demedicalization can constitute a risk in that the health care establishment "illprepared at this present time to get involved with laymen in participative promotion might be tempted to use the (selfcare) evolution as a pretext for minimising its responsibility for making adequate and comprehensive services available to the whole population" (Martin, 1978; p.686).

Effects of selfcare input on health care decision making

Change in the health care delivery system has been mooted for some time. When health care initiatives are shared by both laypersons and professionals changes can be anticipated in the health decision making process (Levin et al, 1976). The selfcare approach contributes to decision making and to political action in health affairs. It was the working hypothesis of the Copenhagen Symposium on Selfcare (August, 1975) that "a viable preventive and therapeutic partnership between individuals, patients, and the professional health care worker is not only desirable but may be essential to achieve improved

access, enhanced quality of care, better accountability and lower costs" (ibid, p.3).

It was the contention of Levin et al. that vigorous 'consumer' oriented demands for participation in (health care) decision making would unquestionably emerge. One of the most important social changes in recent times has been the development of collective power among consumers of medical care (Mechanic, 1972). Community participation in health care delivery has been recommended (Abrams, 1971) and is taking place (Christensen and Wertheimer, 1976; Pecarchic, Ricci and Nelson, 1976) having been fostered by dissatisfaction with the health care system and a desire for a voice, and the realization that many health care decisions do not require highly technical medical knowledge but rather a knowledge of community wants and needs.

Effects on the health care system of considering consumer needs

In 1974 Echvester and Schlacter reiterated that health care providers need to monitor consumer needs and desires, arguing that it is time that health professionals stop trying to change the health care attitude of the consumer without greater consideration of the underlying need structures that such attitudes represent. The creation of health care delivery systems must be more responsive to consumers' potential needs. According to Mushkin (1974) the major goals for health care delivery from the consumer viewpoint are an enlargement of consumer choice, a strengthening of the consumer voice in decision making, an improvement in the response of the health care system to the needs of consumers, an improvement in collective decision making and an improvement in equity of access to the health care system.

A community project in Porirua, New Zealand, is described by Reinken, DeLacey and Salmond (1980). This project, based on the belief that "community participation is the key to community health" (ibid, p.xv) set out to help people define their own health needs and to find ways of dealing with them. The primary aim of the health survey undertaken as part of the project was to get the information the community would need if it was to improve its health through the process of self-care (Beaglehole, in Reinken et al., p.xii). Reinken et al. believe that in time such community projects could build an

alternative health system based more on preventive than curative care. This echoes the dictum of Wilson (1975) that health care planning belongs to society, and the belief of Kirscht, Haefner, Kegeles and Rosenstock (1966) that where any proposed health program requires voluntary participation, information about people's beliefs concerning the issues in question is essential for program planning. As professionals have difficulty in planning rationally if they are unaware of the total context of which health care is a part (c.f., Milio, 1976b) such community involvement is very desirable. Health care planning needs to account for the contribution that can be made by selfcare when the layperson is viewed as a collaborator (or active contributor) rather than a target (or passive recipient), and it requires an ordered framework if solutions are to be realistic.

Problems for the health care system of consumer participation

Gartner and Riessman (1976) in discussing the self help mode state that the involvement of the consumer in the 'double role of consumer and producer' may constrain against hierarchical and bureaucratic modes of organisation - modes which serve the system rather than the consumer. Hochbaum (1969) also discussed the problems which might be encountered when groups confront one another in 'consumer participation'. In brief these problems are the demand for a share in the decision making process and the need for cooperation in decision making. He warned that translating the concept of consumer participation into operation would lead to less adequate services being available because of the danger that compromises between conflicting opinions could contribute to a dilution of standards. Leininger (1973) believing that consumer involvement is desirable offers a model for an open health care system which would be consonant with such involvement.

Jonas (1978) gives the following guidelines for effective consumer/community participation/control. He says that the objectives for creating or strengthening the consumer input must be clearly defined and the administrative principle of responsibility/authority consonance must not be neglected. Furthermore consumers should be primarily concerned with the evaluation of program results, and not with administrative

processes, and neither the professional nor the consumer group should see the other as 'the enemy'.

Lipsky and Lounds (1976) believe that failure to attract consumer participation in health delivery programs designed to increase such participation is due to shifting demands for evaluation of, and accountability within, such programs. If consumers are to be effective they must be knowledgeable. This means that consumers must educate themselves and be involved in the local level of day to day experience in places where people are both well and sick (Milio, 1974). Also they must have some power and influence (Paap, 1978) to "stimulate the sensory and action nerves of the political parties" (Goldsmith, 1973).

Paap (1978) sees the outlook for the consumer voice to be not promising because he believes that if consumers are to be effective they need to be involved in the larger health care system in a way that provides career implications and/or monetary benefits. This runs counter to the whole ethos of the selfcare approach.

Examples of consumer involvement in health care decision making

Despite the problems attempts are being made to involve consumers. One attempt to outline a viable method for taking patients' preferences into account in decision making in a rural primary health care delivery system was made by Parker and Srinivasan (1976) and another has been described by Harrelson and Donovan (1975). The latter was the bold and innovative step of establishing a consumer council to serve as an advisory group to management, and was a successful undertaking in involving consumers as participant partners of providers. Harty (1973) also describes how a group of health oriented citizens spearheaded a drive for community involvement in health care and he comments on the strategic position that they assumed in local health care delivery. Simson and Bleiweiss (1974) describe a similar attempt and isolate the problems which were encountered. These were related to matters of organization, membership, methodology, goal achievement and power distribution, with what he calls 'traditions of the past' also being a problem. These problems

disrupted the relationship of the two parties (consumer - participants and health professionals) who both subsequently sought other mechanisms for community involvement. Jones (1976) describes a program in the United Kingdom which reflects a recognition of the increasing demand for consumer participation in health care delivery. This was the development of community health councils established to recognise the health needs of communities. This has similarities to the aims of the Porirua project described by Reinken et al. and referred to earlier in this discussion.

CONCLUSION

The selfcare approach is wide ranging and has implications not only for personal health care but for the delivery of health care. Its focus on individual responsibility and involvement in community health matters has major implications for the future health of the nation. In making a demand for competent autonomy the selfcare approach may be perceived by individuals as being beyond their level of competence and interest. Not everyone will perceive its health focus to be personally salient. Thus, despite its potential worth, implementation will require that certain factors be considered. Subsequent sections of the thesis will explore factors most likely to mediate effective use of this model. These include the salience of health to the individual, together with how health, vulnerability to illness and personal competency to influence such states, are perceived.

C H A P T E R T W O

HEALTH - THE GOAL OF SELF CAREHEALTH AS THE ORIENTATION FOR NURSING

Nursing is a professional service which exists to foster or restore health, or to facilitate a dignified death. That is, the practice of nursing is related to the state of health or wellbeing (namely its presence or absence) of the recipients of nursing care. Although health has always been the goal of nursing it has not always been its focus. The health orientation which was explicit in the writing of Nightingale (1859), the founder of modern nursing, was subsequently much influenced by medical science and therefore focussed on disease. More recently, as exemplified by the writings of nursing theorists such as Henderson (1955), Rogers (1961), Orem (1971) and Kinlein (1977), health has again become a dominant theme in nursing.

Nightingale in her Notes on Nursing (1859) began by relating nursing to health before turning to differentiate nursing from medicine and to discuss nursing's application in disease. Nursing, said Nightingale, is the means of putting the person in the best possible condition for nature to restore or preserve health, health being defined as "to be well and to be able to use every power we have" (Nightingale, 1859; p. 26). It was Nightingale who made it explicit that the nurse is concerned with health, whether the client be sick or well, and that nursing practice must be structured with an orientation towards health rather than on the basis of disease.

Henderson preserved Nightingale's contribution of making health a first principle when she defined nursing as "assisting the individual (sick or well) in the performance of those activities contributing to health, or its recovery

(or to a peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge. It is also the unique contribution of nursing to help the individual to be independent of such assistance as soon as possible" (Harmer and Henderson, 1955).

Health also features as a first principle in Rogers' (1961) theory of nursing. She expressed the object of nursing in terms of man's movement toward maximum health. In Rogers' terms "nursing aims to assist people in achieving their maximum health potential" (Rogers, 1970; p.86).

Orem's concept of nursing is also oriented to health. She states that nursing "has as its special concern man's need for selfcare action and the provision and management of it on a continuous basis in order to sustain life and health, recover from disease or injury, or cope with their effects" (Orem, 1971; p.1).

Kinlein (1977) makes it explicit that the primary concern of nursing is with health rather than illness, and that nursing proceeds by helping clients to enhance their health. The health-oriented approach to nursing is completely different from the illness-oriented one. In a health approach nursing care is oriented around the healthiest condition the client can enjoy. Kinlein defines nursing as the assistance of the person in his selfcare practices in regard to his state of health. Rather than nursing care being a part of medical care, Kinlein boldly states that medical care is a part of nursing care.

It is important that the nurse have a clear concept of what constitutes health. This aspect of a nurse's knowledge base is discussed by Wu who asks, "How can a nurse promote wellness if she does not recognise its manifestations?" (Wu, 1973; p. 75). It can just as well be asked, "How can a nurse promote health unless (s)he has a clear concept of what health is?" The nurse needs an analytical understanding of the concept 'health' so that (s)he can identify any disparity which may occur between the concept and whatever different concept the client may have. A nurse who has a good understanding of the ways in which health can be described will be in a good position to help the client review a poor health concept and recognise how health can range from 'low

level worseness' to 'high level wellness' (Ardell, 1977). Having a clear understanding of the concept 'health' is of particular relevance at the present time, a time which is characterised by a growing recognition of "the necessity and obligation of people to assume responsibility for (the) maintenance and improvement of their (own) health" (Hardy and Conway, 1978; p. 214).

DEFINITION OF HEALTH

Health is difficult to define (Chen, 1976; Siegel, 1973). Dubos (1968) goes so far as to say that it cannot be defined because different people expect such different things from life. The origin of the word, health, is said to be an old high german word, *haelen* - to make whole - from which is derived our modern 'hale' or 'whole'. At the simplest level health can be defined as the state of being hale or whole. But to define health thus immediately demands that this state be given operational precision. The Oxford dictionary defines 'health' as soundness of body: that condition in which its functions are duly and efficiently discharged. This is a narrow definition because it pertains only to physical condition and to functional ability.

One problem with any definition of health is that validity depends on the purpose for which the definition is constructed. Also a definition may say more about the definer than that which is defined. For example Brearley et al. (1978) point out that there is bound to be a discrepancy between lay and medical definitions of health. In doing so they cite Baumann's (1961) study in which it was found that medical students and clinic patients differed in the emphases they gave in their definitions of health. In general three criteria have been used for defining health, namely the absence of disease, statistical normality, and the presence of positive signs or achievements (Herzlich, 1973). These will now be discussed in turn.

Health as the absence of disease

During the nineteenth century health was described in terms of the absence of disease. The corollary was a belief that health could be achieved through the cure of disease, an expectation which, as Wilson (1975) points out, has not been fulfilled. Health is more than 'being asymptomatic' for it relates to "human possibilities for responsibility, sharing, celebration and interpersonal relations" (ibid, p. 90). On a general wellbeing scale (Wan and Livieratos, 1978) it was found that those who are asymptomatic score more highly than those who have symptoms. Palmore and Luikart (1972) also found that self-rated health was the predominant variable influencing life satisfaction and was a common reason given for happiness. They observed that persons with good objective health may have low life satisfaction if they are convinced that their health is poor and high life satisfaction if convinced that their health is good.

Concerning the pursuit of health through the cure of disease, Tillich (1961) makes the astute comment that it is possible to have 'unhealthy health' when healing under one dimension does not take into consideration another dimension in which health is lacking or even is imperilled by the particular healing, (as for example when an anorexic girl who has achieved goal weight is returned to an unchanged family situation).

In response to the search for health through the elimination of disease Vaux (1961) writing from a theological perspective believes that man is possessed with a passion for the technical defeat of disease and death and that his yearning for health tempts him to defy man's natural boundaries which in themselves are blessings. The glory of humanity, says Vaux, is found not in the ability to overcome its limitations but to turn flaw into strength, to draw out the purposeful from the absurd and to meet the Eternal in the time-bound. According to Illich (1974) health even includes the acceptance of death and the ability to cope with suffering.

Siegel (1971) believes that it is no longer excusable to attempt to define health as the absence of disease. She elaborates on this by saying that until recently the inability to define health had caused little uneasiness, but that the time is now ripe for a conceptualisation of health as a 'universe' consisting of all possible, or conceivably possible, health phenomena. In her opinion such a conceptualisation must precede definition. Fanshel and Bush (1970) found this to be true when they discovered that in order to develop an operational definition of health they first had to develop a 'functional activities of daily living' continuum. This continuum ranged through wellbeing, dissatisfaction, discomfort, disablement, confinement to the home, being bedridden, being isolated, being comatose, and death.

The use of a continuum brings its own problems. The first problem is the question of whether health and illness belong on a continuum at all. Beland (1975) and Luckmann and Sorensen (1974) state that health and illness do belong on a continuum but Natapoff (1978) argues that health and illness are two concepts rather than two parts of a continuum. The latter belief is shared by Jahoda (1956), Rogers (1960), Kaufman (1963) and Hadley (1964). Lewis (1953), in saying that health is a single concept and therefore no break between health and illhealth can be assumed, argued that a health-illness continuum can not be used because such a use would require that the necessary dimensions be measured.

Dunn (1959) brought some light to the continuum problem with his seminal proposal of a health grid having two axes. The health axis ranges from 'peak wellness' to 'death' and is intersected orthogonally by the environmental axis which ranges from 'very favourable' to 'very unfavourable'. The four quadrants each contain a different type of health, namely high level wellness, (either existing or emerging), and poor health, (either protected or unprotected).

Because it is possible to feel well and yet have a disease, if health and illness were to be put on a continuum the question would have to be asked, "What is the transition point between health and illness?" Brearley et al. (1978) select two determining factors for identifying the transition and these are the novelty and suddenness of a complaint, and the extent to which it interferes with normal activities.

Boorse (1975) was right when he pointed out the need to distinguish between disease and illness but his delineation is less helpful than the earlier model of Suchman. Boorse says that health is a value, disease is a disvalue, and illness is a disease which is considered undesirable.

Suchman (1963) however used the term 'sickness' to describe subjective experience, 'illness' to refer to the social role, and 'disease' to describe a medical entity.

One attempt at adequate representation of a health-illness continuum has been made by Twaddle and Hessler (1977).

However their model does not give adequate attention to the distinction which can be made between health, illness and disease. Their model is diagrammed as shown in Figure 2 - 1.

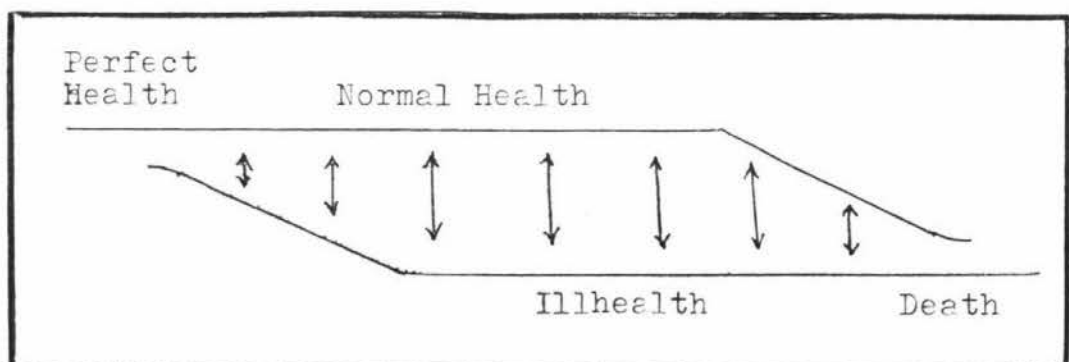


Figure 2 - 1: Relationships between perfect health, normal health, illhealth and death.

Twaddle and Hessler, 1977; p. 103.

A useful solution to the continuum dilemma is presented by Terris (1975) and is based on distinguishing between health, illness, disease, functional level and subjective experience. Terris says that health and disease are not mutually exclusive but that health and illness are. Disease is a medical entity but illness is a subjective experience which has implications in the area of social status and role. By reference to Figure 2 - 2 it can be seen that disease - which is objective - can coexist with both health and illness and that it is negatively associated with functional ability.

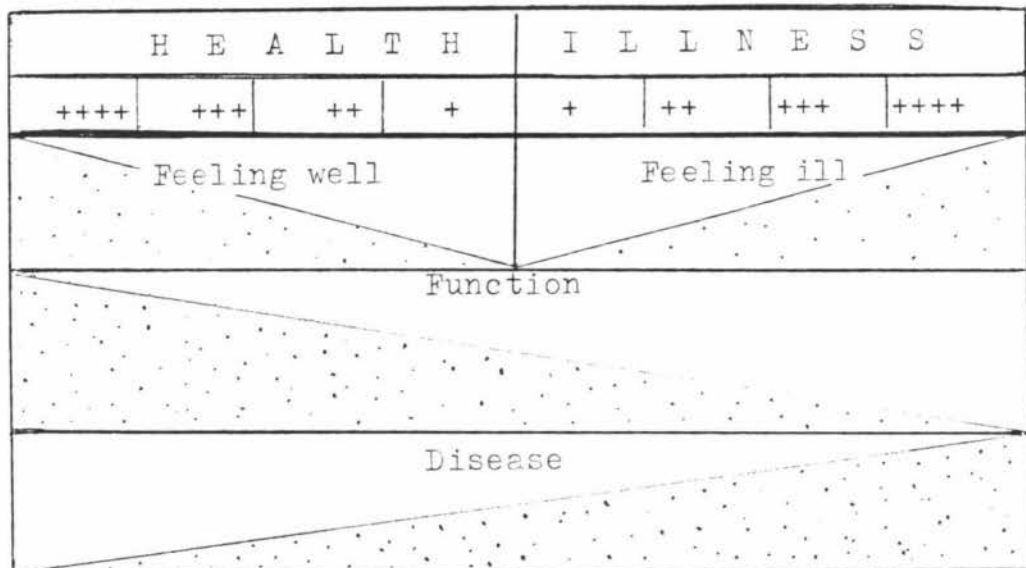


Figure 2 - 2: The health-illness continuum. Subjective and functional aspects and their relation to disease.

Adapted from Terris, 1975: p. 1039.

Such a model is consistent with the approach taken by Williamson and Danaher who by qualifying the word health avoid some of the difficulties attendant upon defining it. They state

Acceptable health is a state of perceived well-being whether or not disease or disability is present, provided that the latter does not interfere either with the sufferer's normal life or with that of people whom he or she may affect through community living. Williamson and Danaher, 1978: p.44.

Terris's model does not include the terminus, 'death'. The following model supplied by the present writer (see Figure 2 - 3) extends Terris's work by allowing that death can occur either at the termination of illness, disease or sickness, or at the 'prime of life' (e.g., death by accident) and that it is possible to be 'well' in the midst of disease, sickness and dying. In this model illness refers to subjective experience (c.f. Terris); sickness to function, (c.f. Suchman's social role); disease to an objective medical entity; and high level wellness to Dunn's (subjective and objective) high level wellness.

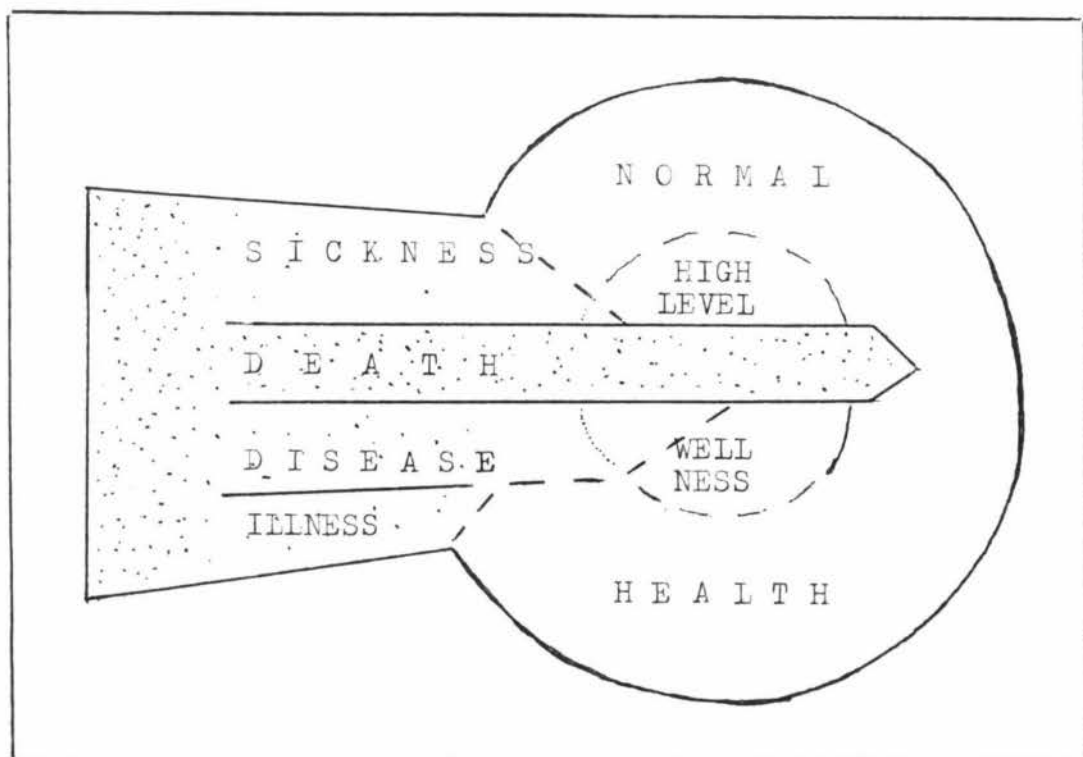


Figure 2 - 3: Relationships between high level wellness, normal health, sickness, illness, disease and death.

Health as statistical normality

According to Boorse (1977) health is "statistical normality of biological function". Boorse prefers the medical concept of health as being the 'absence of disease' because being value free it preserves the main elements of biological function and statistical normality. It also avoids any commitment to 'positive' health beyond the absence of disease. The definition Boorse gives avoids the idealism of the W.H.O. definition but also misses the breadth of its scope.

Using statistical normality as the criterion for health presents several difficulties. Firstly, the decision must be made as to whether the statistics are to be based on the world population, or on the population of a particular country, climate or culture. Secondly, it is not necessarily true to say that what is normal is what is healthy. The prevalence of the gene for sickle-cell anaemia among African negroes is normal but not healthy (Dubos, 1965). Thirdly, as Antonovsky (1973) has pointed out, complete health is in fact statistically deviant.

Health as the presence of positive signs or achievements

Immediately following World War II, three major trends culminated in the formulation of a new kind of definition of health which was set in positive terms. Firstly, medical progress had made it possible to conceive of the elimination of disease and bodily afflictions, and secondly, advances in psychological medicine introduced the temptation to believe that there can be an end to mental illness. The third trend was that of the 'one world' concept in which social goods are available to everyone (Stone et al., 1979). The result of these trends was the definition formulated by the World Health Organization at its inception in 1946, "Health is a state of complete physical, mental and social wellbeing, and is not merely the absence of disease or infirmity" (World Health Organization, 1960).

Terris (1975) contends that the word 'complete' in the W.H.O. definition should be deleted since "health is not an absolute: there are degrees of health" (ibid, p.1038). Another critic, Gelfand (1976) argues that even with Terris's modification a universal definition of health is still implied. Therefore his preferred version is, "Health is a relative state of ... wellbeing (etc.)"

The negative definition of health, (i.e., that health is the absence of apparent disease and infirmity) is preferred by Mechanic (1968) who suggests that this is more operational than the W.H.O. definition in distinguishing the healthy from the sick. Concerning the W.H.O. definition Wu notes that in its terms the "absence of disease or infirmity may be a necessary, but not sufficient, condition for health" (Wu, 1973; p.78). It is right that the 'absence of disease' should not be a sufficient condition for health but it is debatable whether it should be a necessary condition. For example, a person may be disease-free but be psychologically fragile: absence of disease in this case does not mean that such a person is healthy. On the other hand a person may be psychologically and physically fit yet have a disease state (e.g., diabetes) under control. Such a person may be both healthy and diabetic.

The W.H.O. definition owes much to the earlier statement of Sigerist who held that health is "something positive, a joyful attitude towards life and a cheerful acceptance of the responsibilities that life puts on the individual" (Sigerist, 1941; p.100). It is unfortunate that this emphasis on 'joie de vivre' and responsibility was not included in the W.H.O. definition or made more use of in subsequent attempts to define and operationalise 'health'. Two writers who do include this emphasis are Dunn and Jamaan. Dunn (1959) conceptualised high level wellness as a dynamic state of full and effective living, and Jamaan (1971) notes that 'joie de vivre' seems for some to be rooted in their spiritual beliefs and for others in their capacity to contemplate, and that it is a part of health.

Although the W.H.O. definition is notable in that it is positive and includes three dimensions of health (i.e., physical, mental and social wellbeing) it has been accused of being utopian, unrealistic and perfectionistic (Insel and Moos, 1974; Jus, 1973; Brearley et al., 1978). In 1959 Dunn argued that the goal of high level wellness could be achieved and in 1978 Brearley et al., while saying that the W.H.O. definition is idealistic, do state that ideal health is coming to be seen as an attainable goal.

Health as objective functional ability

King (1962) extended the W.H.O. definition when he stressed that health is the attainment of maximum physical, mental and social efficiency for the individual, his family and the community. (Emphasis not in the original.) This emphasis on the family and the community is picked up by Insel and Moos (1974) who say that the word health is only meaningful when it is defined in terms of a given person's functioning in a given physical and social environment. In support of this they quote Dubos' proposal that the nearest approach to a definition of health is that it is a "physical and mental state fairly free of discomfort and pain which permits the person concerned to function as effectively and as long as possible in the environment where chance or choice have placed him" (Dubos, 1965; p.351). McGrory (1978) also defines health within these broader parameters when she says that health is both the process and the function of the person's innate and learned capacities to maintain maximum wellbeing in all systems and spheres of existence including the essential interplay of internal and external environments. However a person's social wellbeing may be secured at a cost to his social contacts. Therefore the inclusion of Dubos' concept of effective function, King's suggestion that one's health can affect others, and McGrory's attention to the role of learned capacity are all valuable additions in the quest for a satisfactory conceptualisation of health.

Although an emphasis on ability to function (Lewis, 1953; DiCicco and Apple, 1958; Parsons, 1958) is a move in the direction of defining health as ability rather than as lack of disability it does not go far enough on its own. A more flexible view can be adopted. For instance, Patrick, Bush and Chen, (1973) describe health as a composite of an individual's level of function at a point in time and his expected transition to other levels, more or less favourable, at future times. This definition sharply distinguishes between the desirability of the immediate level of physical and mental wellbeing and the probability that the health condition may deteriorate, remain constant, or improve over time. It is claimed that the two levels, (function and prognosis), have traditionally been confused in discussions of health. ('Optimum function' is defined as "conformity to society's standards of physical and mental wellbeing, including the performance of activities usual for a person's age and social role"- Patrick et al., 1973; p.8.) On the other hand Terris (1975) points out that the functional aspect of health is objective, and as such is only one of its two major aspects. The other aspect is the subjective one which relates to feeling well. It is interesting to note that in Baumann's (1961) study - in which chronically ill patients and medical students were each asked to define health - reference to a feeling of wellbeing was rarely mentioned by the medical students. (See Figure 6 - 1, p.144.)

Health as objective wellness behaviour

Kaufmann (1963) in discussing the contribution of Dunn (1959) summarised Dunn's conceptualisation of high level wellness. Wellness is the dynamic, forward-thrusting maximization of one's functional potential. In contrast to health, which can be passive and static, wellness is active in that it advances the individual towards complete wellbeing. Yet health and wellness need not be separate but may support each other in a synergistic relationship. Moreover, Dunn's concept will allow that wellness may be found in the absence of health and physical soundness. This point is also made by Oelbaum (1974) who developed

an alphabetical list of 26 hallmarks of adult wellness.

Some examples of Oelbaum's 'hallmarks' are:

- A: performs Activities of daily living,
- E: maintains an Environment conducive to wellbeing,
- H: maintains Hygienic,
- P: demonstrates Personality growth,
- S: receives and recognises Sensory input,
- Z: demonstrates a Zeal for living.

Oelbaum based her list on three premises, one of which was that a person may demonstrate behaviours of wellness at a level appreciably different from his physical capacities.

Wellness then is indicated behaviourally. Wu defines wellness as "an event experienced by man that manifests itself through his behaviours: i.e., individuals experiencing wellness will exhibit a class of behaviours congruent with the event" (Wu, 1973; p.84).

Health as subjective experience

Whereas wellness is demonstrated objectively, wellbeing is experienced subjectively. A behaviour can become functionally autonomous (Allport, 1961) so that a person can demonstrate wellness behaviours (in Oelbaum's terms) even at times when he or she is not subjectively experiencing wellbeing. Conversely, a person may experience a feeling of wellbeing but not exhibit wellness behaviours, as for example when inappropriate behaviour is exhibited by an euphoric or manic person.

A sense of wellbeing may be claimed as the content, indicator or goal of health but such an experience is difficult to analyse or operationalise. Behavioural indicators lend themselves more readily to a definition of health which is stated in positive terms. Yet Wan and Livieratos' study (1978) showed that psychological factors account for more of the explained variance in general wellbeing scores than physical variables.

Health as resilience

One indicator of wellbeing which bridges both the behavioural and the psychological aspects is the ability to cope with the 'slings and arrows of outrageous fortune'. Such an indicator is labelled 'resilience' by Starfield (1974). Resilience is the ability to cope with adversity and the potential to resist a range of possible threats to health. Audy defines health as a "continuing property (of the individual) which can potentially be measured in terms of ability to rally from challenges, or to adapt to (insults)" (Audy, 1971; p.140). Jahoda (1956) put it this way, health shows itself in the manner of handling conflict situations. Walpole (1979) believes also that health has to do with living one's life which includes contending with unavoidable stresses. The ability to live with varying crises characterises the healthy state of a person. To be unable to adapt to everyday stresses constitutes a state of 'illth' which includes both illness and illhealth. "Illth is that state in which one is unable to adapt to the everyday stresses without either disease or dis-ease" (Walpole, 1979; p.17).

An important indicator of wellness and wellbeing is the ability to adapt psychologically, physiologically and behaviourally (Besson, 1967; Dubos, 1965; Perkins, 1938; Francis, 1960; Beland, 1975). King defines health as the manner of "dealing with growth and development stresses within a cultural pattern to which the individual attempts to conform" (King, 1971; p.72). Williamson and Danaher (1978) and Siegel (1973) also equate health with adaptive capacity. Mathers (1970) says that a man is not healthy if he is well adjusted to an unhealthy environment and Levi (1971) says he is healthy if he changes a poor environment. Moos (1979) labels people who do not conform to their environments and so are not subject to its deleterious effects as 'environmental resistors' and says that studies of such people and their coping methods would be particularly informative for health researchers.

The difficulty of defining health

One has to conclude that despite the obvious merits of statements such as that of the World Health Organization a fully adequate definition of health is hard to come by. Siegel (1973) lists six difficulties which stand in the way of defining health. She points out that health is both a value judgement and a relative concept and is an abstraction which cannot be measured in objective terms. Furthermore, health is a subjective state covering a spectrum whose distinction between health and illness is almost imperceptible except for certain acute illnesses. Finally, health is culturally determined. Natapoff (1978) goes further by maintaining that no adequate definition of health exists. She says that a reading of the literature reveals three major reasons for the difficulty of defining health. Firstly since attributes of health and wellness have not been determined a definition of the attributes is impossible. Then also health is a culturally determined concept, hence no universal definition is possible. Furthermore health is a value derived partly from the individuals's own ideas, hence it is difficult to measure.

Other approaches to the definition of health

Health as a commodity

Distinct from approaches which define health in terms of absence of disease, statistical normality, or the presence of valued attributes, a new trend is emerging. Health is increasingly becoming viewed as a commodity or investment (Siegel, 1973). Grossman (1972, 1974) treats health as a durable item which is desired for two reasons. Firstly, it is a consumption commodity because it allows ability to function and be effective, and secondly, it is an investment commodity because it determines how much time can be devoted to working for an income. Thus health can well be called an enabling value (Hubbard, 1970).

Health as a philosophy

Some writers prefer to take a philosophical approach to health and by so doing they expound on health rather than define it. For example Siegel (1973) proposes that health

is not an attribute or a function, but rather is an existential concept which has to do with responsiveness to the environment. Health has been called a 'panorama of life' (Dunn, 1959) and Wilson (1975) provides a wealth of insights which expand on this theme. Wilson believes that health is the human and environmental milieu which enables people individually and socially to grow towards fullness of life. Health, he says, is non-competitive and is "symptomatic of correct interpersonal relationships." Wilson's philosophy is also theological: he asserts that health is a "foretaste of wholeness to come."

BEYOND THE DEFINITIONS: NEW DIRECTIONS

The modern tendency is to move away from defining health and to move towards assessing the quality of life as a whole (Stone, 1979). Even if it were possible to define health adequately it should not be expected that any definition would remain static. The definition of health is evolutionary (Darby, 1977) and changes over time (Nataroff, 1978). At this point of time it is being said that health is both a motive (Stone, 1979) and a goal (Twaddle and Hessler, 1977). It persists as a motive because it is unattainable (Dubos, 1965) and remains as a goal because it is stated in terms of a positive ideal.

The concept of health as being a quality of life is well exemplified by Wilson (1975), Lalonde (1974) and the O.E.C.D. Index (1976). Wilson says that health is not an individual matter but an interpersonal one and he includes as interpersonal components such aspects as friendship, joy, celebration, creative expression, housing, learning, politics, job satisfaction and responsibility. The O.E.C.D. Index is an attempt to provide a tool by which social wellbeing can be measured. This index includes indicators, each having a validity rating, of such operationally defined areas as personal health and development, learning, employment, leisure, economic status, physical environment, personal safety and the administration of justice. Lalonde proposes a Health Field Concept comprising Environment, Human Organ-

ization, Human Biology and Lifestyle, and suggests that this conceptualisation will contribute to health by widening the perspectives of health care delivery. It could be said that Moutin (1937) was prophetic when he insisted that people who call themselves health workers should go beyond disease and into the broader fields of human comfort and vitality.

No matter what aspect of health is being discussed Wilson (1975) can be relied on to stretch one's horizons. He asserts that we need to reshape our ideas and to ask ourselves, "What is health for?" Is it for personal fitness for survival and self renewal, for creative social adjustment and self fulfilment as stated by Hoyman (1967)? If so, then health education should help us to "establish stronger links with nature and life .. and with the spiritual dimensions of ourselves and the universe" (ibid, p.202). In Hoyman's terms, life must have some meaning if health is to have any instrumental value, for as Frankl puts it, "you can only actualize yourself to the extent to which you are fulfilling the meaning of your life" (Frankl, 1967; p.180). Frankl also sounds a warning which is worth noting: "Once a man makes health his main goal, he has already fallen sick - he has become a hypochondriac" (ibid, p.179). It is paradoxical that when one's health is good, one is unaware of it.

THE USE OF DEFINITIONS AND DIRECTIONS

The discussion up to this point has introduced several ways in which health can be conceptualised and has shown that all make a relevant contribution to our understanding of it. Ideally, health is freedom from symptomatology, plus the presence of valued attributes, plus 'something more'. That 'something more' will be unique for each person and will reflect the way in which health is conceptualised and for what reasons health is wanted. Leaving aside the definition of health as being statistical normality there are three broad definitions of health namely, being asymptomatic, having functional ability and the opportunity to exercise the same, and experiencing wellness. These three emphases, evident in the writings of Baumann (1961), Herzlich (1973),

Twaddle and Hessler (1977), Wu (1973) and Mechanic (1972) form a hierarchy. Dunn (1959) focusses on the wellness aspect.

A Hierarchy of Healths

Baumann (1961) found in studying the conceptions of health and physical fitness held by two groups of respondents - clinic patients and medical students - that responses concerning health fell into three categories namely a feeling orientation, an asymptomatic orientation and a performance orientation. In 1973 Herzlich published the results of a study in which respondents were asked to define health. Descriptions fell into three categories, Health-in-a-vacuum, Reserve of health, and Equilibrium. Health-in-a-vacuum was the asymptomatic orientation, Reserve of health described robust health and resistance to attacks, and Equilibrium referred to a state of physical, emotional and social well-being. On the organic level Equilibrium is the state where the absence of awareness of the body, characteristic of Reserve of health, gives way to the immediate awareness of perfect wellbeing.

Herzlich's results paralleled Baumann's in that Baumann's 'feeling state' matched Herzlich's Equilibrium construct - where the focus was on 'doing'; Baumann's 'performance' orientation was analogous to Herzlich's Reserve of health - the focus being on 'having' resilience; and Baumann's 'asymptomatic' orientation was analogous to Herzlich's Health-in-a-vacuum construct where the focus was on 'being'.

Twaddle and Hessler (1977) put the 'feeling' orientation into a psychological frame of reference, the 'performance' orientation into a sociological frame, and the 'asymptomatic' orientation into a biological frame of reference. Wu (1973) also puts health descriptions into three groups namely health as being the polar opposite of illness, health as lying on a continuum which ranges from peak wellness to death, and health as being a qualitatively different state from ill-health. Mechanic (1972) notes that people seek health so as to "do tasks, pursue goals and avoid distress" (ibid, p.251).

Wu's categorisation of health as being a qualitatively different state from illhealth and Mechanic's 'goal pursuit' correspond to Baumann's 'feeling' orientation; Wu's categorisation of health as being the polar opposite of illness and Mechanic's 'avoidance of distress' correspond to Baumann's 'asymptomatic' orientation; Wu's health as a continuum and Mechanic's 'task performance' correspond to Baumann's 'performance' orientation. Dunn (1959), as has been mentioned, distinguishes high level wellness from health. Health, in Dunn's terms, 'maintains' but does not 'advance', whereas high level wellness - which can be found in the absence of health and physical soundness - is an open ended and dynamic concept embodying maximization of potential. High level wellness belongs in the 'feeling' category because it describes the 'verve' of maximizing one's potential. The emphases of the six writers referred to above are summarised in Table 2 - 1.

Table 2 - 1: Orientations to Health. Three emphases as given by Baumann(1961), Herzlich(1973), Twaddle and Hessler(1977), Wu(1973), Mechanic(1972),Dunn(1959)

SOURCE	O R I E N T A T I O N S		
Baumann	Performance	Asymptomatic	Feeling
Herzlich	Reserve of Health (Having)	Health-in-a vacuum (Being)	Equilibrium (Doing)
Twaddle & Hessler	Sociological	Biological	Psychological
Wu	Health as continuum	Health as polar opposite of illness	Health as a qualitatively different state from illhealth
Mechanic	Task performance	Avoidance of distress	Goal pursuit
Dunn			High level wellness

The three orientations to health are hierarchical yet inclusive. They are hierarchical in Maslow's (1954) terms: when the most basic need is satisfied a higher need emerges. The organization of needs is a hierarchy of prepotency. As a person goes up the hierarchy of prepotency there is a decreasing percentage of satisfaction with the stage which has been transcended. On the whole most of the average person's need 'to be asymptomatic' is met, much of his need 'for functional ability' is met, but little is met of his need to 'experience wellness'. The experience of wellness is enhanced by being asymptomatic. The immediate goal for the sick person may be assumed to 'be asymptomatic' and the goal for the convalescent, 'to have functional ability'. Only when the asymptomatic person is functioning effectively will the current need 'to experience wellness' emerge. A client can be assisted to consider and even review his own definition of health, which will then become for him both a motive and a goal. A client's movement toward health is not really complete until his health goal is 'to experience wellness'.

According to Travis (1977) the idea of helping people to attain wellness and higher levels of wellness is relatively new. Travis has designed a wellness scale which can both facilitate a reorientation from health as being non-sickness to health as being a positive state of wellbeing, and also serve as a guide to health education. His (1980) model is presented as Figure 2 - 4.

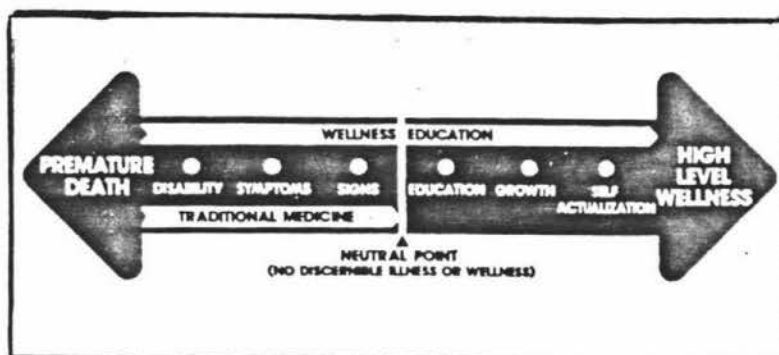


Figure 2 - 4: High level wellness as the terminus of the health - death continuum. (Travis, 1980)

According to Ardell (1977) the basics of wellness are the five areas of self responsibility, nutritional awareness, stress management, physical fitness and environmental sensitivity.

It would be a mistake to think that good health, let alone high level wellness, is equally desired by all people. Brearley et al. (1978) point out that for some people illness can be more attractive than health. There are those who perceive illness as a 'Liberator' because it provides a socially sanctioned opportunity to enjoy time out from role obligations (Herzlich, 1973). It is suggested by Balint (1964) that illness can be attractive to people who find it difficult to cope with life problems.

The Nurse as a Health director

The aim of nursing is to help clients use their personal and personally selected resources to recognise and achieve their own health potential. The nurse will not assess that her intervention is complete until she has acquainted the client with any further health options which are as yet unknown to, or unsuspected by, him. One way the client can be made aware of further health options is through the use of a wellness inventory or checklist (e.g., Oelbaum, 1974; Ardell, 1977; Travis, 1977). A copy of Travis's checklist is included in Flynn (1980, pp. 143-148) as also is Ardell's (1977) wellness-worseness Health Assessment Guide (Flynn, *ibid*; pp. 131 - 141).

Oelbaum's 26 hallmarks of adult wellness have already been mentioned. Travis's (1977) inventory consists of 104 questions arranged under the headings of productivity, relaxation, sleep; personal care and home safety; nutritional awareness; environmental awareness; physical activity; expression of emotions and feelings; community involvement; creativity and self expression; automobile safety; parenting. Ardell's (1977) checklist consists of 97 questions arranged under the seven headings of self-responsibility; high-risk behaviours; environmental sensitivity; appropriate use of the medical system; nutritional awareness; physical fitness; stress management. A client who uses such a checklist is not only

filling in a form but is undergoing an educational experience. It will probably come as some surprise that many of the questions included in the inventory do belong within the rubric of health. A client who recognises and selects a further health option to work on is making progress in selfcare awareness and agency.

C H A P T E R T H R E E

THE CITIZEN: A SELF-CARING HEALTH PRACTITIONER

PERSONAL RESPONSIBILITY FOR HEALTH

A Copernican-like revolution now appears imminent in health care delivery. Whereas disease was once the organizing concern of health delivery, with health professionals holding a central place, now selfcare for health is becoming the organizing concern, with health professionals being supplementary to and supportive of the goal of selfcare for health (Levin, 1977; Hattinga Verschure, 1980). The time has come, say Girdano and Everly (1979) for "health professionals to truly educate members of our society in the art of self health and in the role of self responsibility for gaining and keeping a high level of wellness" (ibid, p.xi).

Having suggested such a revolution - namely the reversal of what is perceived to be central and to have priority - consistency demands that attention be first directed to the citizen as a self-caring agent in health. Then the professional contribution (which such citizen as a consumer invokes and/or receives as a client of the health care system) can be considered. Health professionals, and nurses in particular, must not lose sight of the fact that the client is first a citizen who has responsibility for his health care and only secondly a consumer and thus a client of the health care system. It is only when the citizen seeks professional assistance with his practice of health-related selfcare that the professional role becomes visible.

The major task that faces health care delivery in all developed countries (where the costs of health care have grown more quickly than the national income) is to develop a better health culture. Health professionals can help in this respect by encouraging clients to ask what they as citizens can do to avoid illness and to enhance wellness. The health professional needs to be a health practitioner himself in order

to give a useful answer to the latter part of such requests for information because the best way to sell wellness is to model it.

Inputs from both sources - citizens who are selfcare oriented and health professionals who are practising a wellness lifestyle - are required if consumers in general are to make the change from dependency to autonomy, from a cure-of-illness orientation to a health-culture one, and so become health practitioners themselves. Individual responsibility is the characteristic requirement of effective selfcare for health. A wellness lifestyle which is fuelled by a strong sense of personal responsibility can be more satisfying than any combination of self-gratifying high-risk behaviours, claims Ardell (1977). The problem is that people who want to achieve such a lifestyle in order to maintain and maximise their health often have to battle society and the current culture in its pursuit. The easy way would be to opt out of such attempts when they face the stonewalling of the entrenched culture, but the efforts of the few could eventually procure a change in habits for the many. For example, smokers are increasingly encountering sanctions against their air-polluting behaviour from those who are becoming more health conscious.

If health professionals are going to continue stressing that people must take more responsibility for their own health then they, the professionals, need to create opportunities where no such opportunities currently exist to provide education both for health and for wellness, and to model such health and wellness themselves. Also health professionals should not assume that clients will invariably desire to be responsible for their own health selfcare or be equally ready to consider, or benefit from, this sort of approach.

Readiness for selfcare

The areas in which the citizen can be selfcare active are in universal selfcare behaviours (where selfcare knowledge is used in health maintenance), in health-deviation selfcare behaviours (where selfcare knowledge is used in the audit and control of treatment programs), in health-related polit-

ical decision making involvement, and in self-help group involvement. What a given individual is able to achieve in the way of selfcare is very much a function of his 'readiness'. It is this writer's proposal that a person's readiness (or lack thereof) to be a selfcare health practitioner will be a function of certain individual enabling or inhibiting factors. These factors are assumed to be the personal perception of health, the personal propensity for selfcare, the perceived locus of control, and the perceived location of blame for illness. The Areas of Selfcare and the Enabling or Inhibiting factors will now be discussed in turn.

AREAS OF SELF CARE

The components of the selfcare model have already been presented (see Figure 1 - 1, p. 9). This model comprises universal and health-deviation selfcare behaviours and illustrates the interface between care which is personally initiated and care which is professionally assisted. The citizen who is acting as a health practitioner will demonstrate behaviours which belong in one or more of the components of the model. (See also Figure 3 - 1, p.78).

Personally initiated selfcare

Universal selfcare behaviours

Universal selfcare behaviours may be based either on habit or on knowledge. A particular culture mediates certain selfcare habits. In the European culture two examples of selfcare behaviour learned as part of growing up are tooth brushing and personal hygiene. The person who engages in such selfcare habits may be quite unaware that they are part of health-related selfcare activity. It is possible that certain ostensible selfcare practices mediated by the culture can actually mitigate against health. For example in Nuer society (in the Sudan) people use cow's urine to wash themselves, believing it to be a purifying substance (Evans-Pritchard, 1940). In our society the use of the handkerchief is so commonplace that its unhealthy potential is easily

overlooked.

Although selfcare is by definition a deliberate activity, behaviours which are habitual are included because they are expressions of purposeful activity and derive from a knowledge base which is mediated by the culture. Some of the knowledge may be non-scientific, unscientific or plain superstitious. The citizen need not uncritically accept this transmitted knowledge, even if it purports to be scientific, but will be exercising selfcare behaviour if he seeks to test and extend the body of extant knowledge.

The citizen's health maintenance behaviour will include such things as the maintenance of body processes, (e.g., procuring and using an adequate intake of pure air, clean water and nutritious food), the achievement of regular and adequate elimination of waste products from the body and the practice of appropriate hygiene related to elimination, and the securing of a balance of activity and rest. Seeking times of both solitude and social interaction, avoiding (and protecting oneself from) hazards, and maintaining normality are also included as health maintenance behaviours (Orem, 1971).

Although disease prevention behaviour includes everything enumerated above under health maintenance practices it specifically refers to certain citizen behaviours such as the adjustment of lifestyle to protect oneself against such states as hypertension, heart attacks and lung cancer, the manipulation of one's environment to make it personally functional, aesthetically satisfying and stress protecting, and the learning of ways to cope with stress, to communicate functionally and to relate creatively in interpersonal situations. Self-monitoring, assessing and diagnosing requires a scientific knowledge base and an awareness of normal personal physiological, biological and psychological processes so that deviations can be recognised when they occur.

Diagnosing is a problem solving and decision making process. The result of this process will be a decision whether or not to engage in health-deviation selfcare. Having medical, dental and optical checkups and making use of screening programs (e.g., mobile chest Xray) together with being

immunized for infectious or allergic conditions are examples of consumer behaviours.

Health-deviation selfcare behaviours

The citizen who has decided that he is experiencing a deviation from his health state may decide to treat himself or to seek help. He may seek help from family or friends, (Freidson 1961 calls this 'lay referral'), from health professionals or from a health care service. Consumer behaviour occurs whenever a citizen makes use of a health care service, and when a consumer approaches a health professional for help he becomes a client. One health care service available to consumers is the Cold Selfcare Centre, a walk-in setting where individuals, having confirmed their diagnosis of a common cold by use of an algorithm, can receive an educational leaflet on how to care for themselves (Zapka and Averill, 1979). Selfcare in illness episodes or chronic conditions will include both what the citizen can do for himself and what he as a client engages to have done for him. A patient who is under care at the insistence of others, or out of unquestioning compliance with medical direction cannot properly be described as a health selfcare practitioner, although he can be treated as one. That is, although the client's orientation is not initially a selfcare one, the care he receives can be focussed on involving him as an active participant in his own health care.

Self Medication One avenue of health-deviation selfcare is self medication. Wilson (1975) says that part of going sick healthily is knowing what to treat, and what to ignore. A rational policy of self treatment requires an approach to self diagnosis which is at least as rational and logical as that which is associated with normal medical practice (Williamson and Danaher, 1978). It is important that persons know how to treat themselves safely and effectively if they do know what to treat. Self medication is not an undesirable alternative to orthodox medical care according to Kessel and Shepherd (1965), nor is self medication the whole content of selfcare although Danaher (1979) claims that this is how selfcare is perceived by the medical profession. Self medication has become a part of the

everyday behaviour of healthy people (Quah, 1977). The availability of patent remedies and the influence of advertising has contributed to this behaviour. Quah found the practice of self medication to be positively correlated with the persons level of formal education and he gives recommendations for an informed self medication program.

However self medication does have its problems, three of which are inappropriate use, misuse and abuse of medication, and the duration of a self medication regime. Darby (1977) enumerates the pharmacological and toxicological risks of self medication, (i.e., excessive and prolonged use, addiction, antiphlogistic interference, and interaction with other drugs), as well as the other risks (misuse, improper use, inappropriate use, and delay in diagnosis).

Kasl and Cobb (1966) note that the topic of self medication is generally neglected in studies of utilization of the health care system. A study by Danaher (1979) helps to remedy the deficiency. This study had as one of its aims the assessment of the adequacy of self treatment from a medical viewpoint. It was found that approximately 80% of self treatment was completely or partially adequate and only 5% was harmful. Danaher supports the concept of 'informed self treatment' and notes that it is the pharmaceutical companies who are the primary advocates of research into self medication. The results of Danaher's study support the assertions of Kirscht (1974) and Darby (1977) who maintain that self medication is not an alternative to medical care but an integral part of it. Pratt (1973, 1976) is another advocate of self medication, in this case by families. Darby (1977) enumerates as advantages of self medication its ready availability, convenience and lower cost. Also he says that self medication keeps the individual functioning at times when he would otherwise be unnecessarily indisposed (e.g., by headache, constipation, indigestion) and it relieves the work load on the medical service.

Adjustments in selfcare behaviours As was discussed earlier in Chapter 1 (p. 18) when a selfcare-oriented citizen seeks medical or professional assistance he will expect to interact in interdependence with his chosen health adviser and to do

whatever is within his ability to audit and control his treatment regimen. He may need to revise aspects of his selfcare regime. Examples of such revisions are the adjustment of ways of meeting universal selfcare requirements, the establishment of new techniques of selfcare and the revision of the routine of daily living (Orem, 1971). Developing a new lifestyle compatible with the effects of the health deviation, modifying the self image and coping with the effects of both the health deviation and the treatment regime are also areas in which revision can occur.

Involvement in health-related political decision making

The citizen who is selfcare active will not only be directly active on his own behalf but indirectly active when he contributes to political decision making regarding health care delivery. This aspect of selfcare has already been discussed in some detail in Chapter 1 (p. 23f).

Self Help group membership

Self help groups are voluntary small group structures organized by citizens who are peers and who share a common problem. The groups meet a specific health need and provide services not adequately supplied by other means. Examples of needs met by self help groups are crisis help, help for the stigmatised, for those trapped in self destructive behaviour, for the bereaved, for parents without partners, for former mental patients. One useful typology of self help groups is given by Katz and Bender (1976). The broad categories they supply are Self fulfilment and personal growth, Social advocacy, Alternative lifestyle, and Rock bottom sufferers. Another typology given by Gartner and Riessman (1976) uses the categories Rehabilitation, Behaviour modification, Primary care, prevention and case finding.

The emphasis of self help groups is self examination and self knowledge, personal responsibility, peer support and face to face interaction. The effectiveness of such groups derives from the helper-therapy principle, the use of indigenous help and the implicit demand that the consumer not be passive (Kush Goldberg, 1979; Riessman, 1976). Self help groups increase medical awareness and consumer sophistication, and

are described as an 'impressive resource' by Levin (1978 b). Butterfield (1976) recommends self help group membership and says that this is a very effective way of reinforcing health education. The group exerts influence to conform and this influence is necessary for persons who on their own are unable to make the changes that health education programs recommend. Probst, in a letter to the American Journal of Public Health, (1977) protests that self help groups need to use professionals constructively. Gartner and Riessman (1976) itemise as dangers of the self help system the threat of opposition to expansion of services and the reduction in professional and system responsibility. They add that member satisfaction may replace accountability for, and evaluation of, care and that self help may be coopted by the professional establishment.

Henry (1978) in a somewhat defensive article complains that the responsibility for non member sufferers must (still) fall on to professionals, and that self help groups don't accept responsibility for sufferers who do not benefit from their group experience. Furthermore he takes issue with any self help activity which seeks to change the member by group pressure or to change the norms of society so that the member's condition will be perceived not to be 'deviant' but simply 'different'. He complains that Alcoholics Anonymous in Britain does not serve alcoholics but only 3.4% of the alcoholic population, and he plaintively asks, "what happens to the rest?" Self help groups, he concludes, serve only the problems of their members and provide a convenient excuse for avoiding social change.

Rockwell (1976) from participant observation of Weightwatchers International in the United Kingdom, United States of America and Denmark notes the tendency away from the personalised grassroots 'sharing' approach towards a more bureaucratic professional organization. Robinson and Henry (1978) also point to the full fledged management structure which approaches an 'iron law of oligarchy' within self help groups. They also suggest that self help groups are mere props for a defective (health care) system.

Despite the above criticisms the contribution made by self help groups to the health of their members is significant. Katz (1970) estimated that over one million persons in the USA were involved in self help group membership. However the contribution of self help groups is overlooked by health professionals (Zola, 1972) who consider their claims to be exaggerated. If health professionals were to use the self help literature they could learn a great deal, say Bumbalo and Young (1973) and Dilley (1978). Dilley recommends the self help literature to health professionals because this material gives encouraging examples, provides clear step by step procedures, furnishes reports of effective results, suggests ways of confronting self defeating thinking and gives material for assignments and change procedures.

Summary

Personally initiated selfcare includes universal and health-deviation behaviours undertaken on one's own behalf, involvement in health-related decision making undertaken on the community's behalf and the help seeking behaviour of self help group membership. When the individual seeks help not only for his health care but for illness related matters he has not stepped out of the selfcare model; help seeking and resource using are part of selfcare. The extent to which assistance is required is a reverse function of that person's own selfcare agency. The greater the person's disability the greater will be his need for assistance. This assistance can range from supplantive to supplementary to supportive assistance and will decrease down this range as selfcare agency is regained. The assistance may be given by family, friends, or health professionals. A nurse who works within the orientation of selfcare for health is practising self-care nursing. The primary concern of nursing is assisting individuals, families and communities to live effectively with varying states of health. The role of professional nursing in teaching, guiding and supporting the public in the practice of good selfcare as this applies to health, is extensive.

Professionally assisted selfcare

Emergence of the Selfcare concept in Nursing Theory

From the time of Florence Nightingale to the present individual nurses have endeavoured to conceptualise nursing—that is, to define it and to describe its parameters. The selfcare model for nursing represents a major shift in the series of nursing models which dates from that time. Nightingale, in relating nursing to the knowledge a layman should have, anticipated the theme of the selfcare nursing model which states that the citizen should be his own health practitioner. Nightingale (1859) distinguished between two types of nursing namely the art of nursing proper (i.e., nursing the sick), and health nursing (i.e., the art of health). The art of health is very much the concern of both the selfcare nursing model and the current selfcare movement (which was discussed in Chapter 1). In the art of nursing the sick the selfcare nursing model treats the client as a collaborator in care and not as a dependent patient as the nineteenth and early twentieth century nursing models did. The phrase 'maternity of nursing' coined by Shaw in 1885 illustrates the nineteenth century dependency orientation. The current views of both nursing care and mothering roles have changed since then. The selfcare model is based on a relationship between client and nurse which, being consultative, allows the pooling of abilities and skills of both parties. Health skills transferred to the client enable the client to become more independent of the nurse. Although Harmer in the early twentieth century continued to cast the patient in a dependent role (Harmer, 1922) her emphasis on patient education foreshadowed the emphasis on patient selfcare agency which began to emerge in subsequent conceptualisations of nursing.

The idea of patient agency in pursuit of health and of ways to promote patient agency is clearly outlined by Frederick and Northam who state that modern nursing is not limited to the care of the sick but is more far reaching for it includes teaching the patient (and others in the home and in the community) to "care for themselves and..

..to use the available community resources" (Frederick and Northam, 1938; p.3). It will be recalled from the discussion in Chapter 1 (p. 6f) that both these aspects are components of the selfcare model.

As has been stated earlier in this chapter, the organizing principle of, and orientation to, client care should not be some disease state but rather the client's best possible health state. "The primary responsibility of the nurse" says Henderson (1960, p.5) "is helping the patient - who is the central figure- with the health related activities that he usually performs without assistance." The nurse has the unique function of serving "as a substitute for what the patient lacks to make him 'complete', 'whole', or 'independent' with respect to physical strength, will or knowledge to reach good health" (ibid, p.4). Patient agency is here being related to health or to its recovery, (or to a peaceful death).

Another nursing theorist, Rogers, retains the emphasis on health as being the aim of nursing. Nursing, says Rogers (1970) aims to (serve people and to) assist them in achieving their "maximum health potential". The themes of health and of patient agency to secure the same have now become central in the development of nursing theory. During the 1960s and early 1970s one group of nurses (the Nursing Development Conference Group, or NDCG) confronted the problem of structuring nursing knowledge around the conceptual element of selfcare and concluded that "Orem's (selfcare) concept of nursing at this stage in the development of nursing is an adequate concept" (NDCG, 1973; p.72).

According to Mullin (1980) the selfcare orientation to nursing practice is the most liberating and dynamic idea that has been introduced into nursing theory in the last 20 years. The concept arises from the recognition and acceptance of the ideal that individuals 'own' their health and are responsible for it. This concept introduces a change in orientation not only to nursing but also to the patient's and nurse's perceptions of their roles. In particular the concept revolutionises the approach to patient education, making it an organising principle, rather than some optional fringe benefit, of care.

Although the selfcare model of nursing goes beyond the earlier models it can make use of any of their dominant themes without being restricted by them. The dominant theme of the selfcare model for nursing is that "nursing has as its special concern man's need for selfcare action and his provision and management of it on a continuous basis" (Orem, 1971; p.1). The condition which validates the existence of a requirement for nursing is the inability of an adult on his own behalf, or of a parent or guardian on behalf of a child, to maintain continuously the amount and quality of selfcare which is therapeutic in sustaining life and health, in recovering from disease or injury, or in coping with their effects. The requirement for nursing "is modified and eventually eliminated when there is a progressive, favourable change in the state of health of the (person in question) or where he learns to be self directing in daily selfcare" (Orem, 1959; p.5).

The nurse as the selfcare assistant

Selfcare is the practical response of an individual to an experienced demand to attend to himself. This demand may originate in the person or be perceived by others, and may be met or ignored. The central assumption of selfcare is that the individual has the ability to perform on his own behalf. One of the five basic assumptions articulated about selfcare by Fonaroff (1977) is that, given the proper help, people can be their own health practitioners.

The argument in this present study goes further in that it attempts to explore the conditions under which people do, or do not, exercise their selfcare capability. It is proposed by this thesis that the quality of a person's selfcare system will be a function of the reinforcement value of such health as is contingent upon selfcare practice (see Figure 3 - 1, p.78). It is suggested furthermore that the quality of the selfcare system will be associated with the perception of locus of control, perception of health, and the location of blame for illness, (see pp.75 - 87).

In Grem's (1971) terms nursing intervention is only appropriate where there is disparity between a therapeutic demand for selfcare and the ability or resources to meet that demand. The nurse then compensates for the client's disability. The character of any interferences in the patient's customary ability to undertake his selfcare practices will indicate the general dimensions of the nurse's responsibility for the patient, the methods that can be used in validly assisting the patient, the probable duration of the patient's need for assistance, and the patient's future potential as a selfcare agent.

The nursing contribution to client selfcare. The art of nursing is concerned with the ability of the nurse to assist persons who need help with therapeutic selfcare in the design, provision and management of systems of such selfcare both within their environments of daily living and in the hospital or clinic situation. The focus of selfcare nursing is helping the individual to achieve therapeutic selfcare. If the client is unable or unwilling to contribute to his own therapeutic selfcare, or if he is ineffective in his efforts then the nurse needs to assist in the management of his therapeutic selfcare. The nurse's primary concern is the therapeutic selfcare which the client in his own view requires but cannot perform.

It should be noted that the present tendency for people to take more initiative in selfcare activities can pose both problems and opportunities for the nurse. For example home birth is increasingly becoming an option of choice. Yet Cameron, Chase and O'Neal (1979) describe how half the number of women who planned to have home deliveries and were interviewed reported hostility from health professionals. Another client choice is the right to die in a manner acceptable both to the client and to his family. This may mean that the death take place at home with the nurse giving supportive care (Kobrzycki, 1975). The right for the patient to decide such a course for himself will be denied him if he is 'belittled by a conspiracy of silence' concerning his terminal state (Doust, 1977). In terms of the selfcare model a patient should be allowed to choose not to have life prolonging procedures - which

Wilson (1975) says may be a product of misplaced clinical enthusiasm. The problem is how to decide if such a choice is suicidal, or is what Cawley (1977) calls 'passive euthanasia', or is an expression of client maturity. Illich (1974) claims that the health profession secures compulsory survival in a planned and engineered hell. By contrast Walborn (1980) describes how hospice care, in which client behaviour and decision making is fostered, can provide the opportunity to maintain personal control over one's life until death. McGrory (1978) describes this as the Well Model Approach to the care of the dying client.

The goal of the nursing art is to achieve a health result for individuals (whether they be sick or well) when they need help. This health result may be the regaining or the maintenance of health, or the stabilization, control and minimization of the effects of chronic poor health or disability (including the ill effects of treatment). The results of nursing are beneficial to the client if the client's selfcare is accomplished and the client is moved towards responsible action and increasing independence in selfcare. This may occur through the client's own efforts or through the efforts of other non-nurse assistants who are becoming increasingly competent in compensating for the limitations of the client's selfcare agency. Thus the health goals of an individual in need of help are associated with that individual's movement away from either a restriction of human activity or a dissatisfaction with the current health status, towards either normality or enhanced wellness.

Client selfcare agency. In order to achieve health goals the individual needs to have a power of selfcare agency. This latter term refers to the ability or power of an individual to engage in estimating and performing behaviours which are relevant to selfcare - i.e., which maintain life, health and wellbeing. Selfcare agency is based on knowledge, skills, attitudes, beliefs, values and motivation, and thus is an acquired agency. This agency is described in terms of abilities and disabilities. Disabilities take the form of deficits and/or limitations and can occur in the areas of consciousness, perception, knowledge, ability,

motivation and environmental conditions. A selfcare deficit is a qualitative or quantitative inadequacy which occurs when an individual cannot action their usual self-care system. A selfcare limitation occurs when less is being done in the way of selfcare than could be done due to a lack of knowledge, skill or motivation (NDCG, 1973). An individual may have a limited selfcare system, or an effective and comprehensive selfcare system, and either may be reduced by a deficiency caused by illness or other factors. Both limitations or deficiencies in selfcare agency provide the conditions for, and the content of, the practice of selfcare nursing.

Nursing agency. On the nurse's part there is a need for nursing agency, namely the power and effort needed to design, provide and manage for individuals having selfcare limitations or deficits the "material and energy inputs which are essential for the self maintenance, health and wellbeing of these others" (NDCG, 1973; p.91). Nursing agency is activated when an unwell person with selfcare limitations or deficits approaches or allows another to undertake nursing behaviours on his behalf. It is also activated when a well person who practices selfcare is aware of a selfcare deficit or limitation and consults a nurse for help in improving and/or extending his selfcare system.

The nurse secures information and makes judgements concerning the client's need of nursing care in the light of the status of his selfcare agency and the health goal sought. This will require that data regarding the client's physical, emotional and social state as perceived by himself and/or significant others, and the client's perceptions of - and the changes that will be demanded of him by - his altered state, be gathered. The nurse who uses a selfcare model of nursing will need a base line of the client's customary selfcare behaviour in order to establish expectations for the client as an agent in providing and managing his own therapeutic selfcare and in overcoming his current disability. When the nurse assesses the base line selfcare system she will perceive that the person with an already limited system will be a candidate for a more extensive educational effort on the part of the nurse than the

patient whose selfcare system is customarily more sufficient.

According to Orem (1971) the client's base line will be influenced by mental development, personal maturity, values, skills, knowledge, social effectiveness and competency in deliberate action as well as by reinforcement factors such as group and family membership. The proposal of this present study is that this base line will also reflect other factors, namely the client's perception of health, locus of control, and location of 'blame' for illness, as well as his propensity for selfcare behaviour, and that these are all appropriate areas for nursing intervention. Nursing behaviours relating to selfcare limitation or deficit will be addressed to judging the presence, causes and dimensions of the limitation or deficit and to selecting action options for altering selfcare agency in the light of the current therapeutic selfcare demand. It is further suggested by this present study that the action options selected and the timing and duration of their application will depend on the client's readiness for a selfcare approach which is also judged by his perception of health, locus of control and location of blame for illness, plus his customary selfcare repertoire.

Types of nursing care. Nursing care can be of three types, wholly compensatory, partly compensatory and supportive-educative. In wholly compensatory care the client has no active role and the nurse 'does for' the client. The nurse compensates for client inability by accomplishing his selfcare and supporting and protecting him. In partly compensatory care the nurse and the client each (in varying degrees) perform the necessary care. The nurse 'does with' the client. The client input will depend on his energy, motivation, skill, limitations and deficits, and psychological readiness, but the client will perform some part of his care and accept assistance with the rest of it. In supportive-educative care the nurse provides support, guidance, teaching and a developmental environment to a client who is accomplishing his own selfcare.

An example of this sort of care is given by Frandemont and Sclafani (1978) who provide a five-step teaching program in which a patient progressively takes responsibility to self-administer and chart his own medication, having learned the properties of the same.

All three aspects of care are well illustrated by Bromley (1980) in her documented care of an ostomy client. Bromley's account is particularly interesting because not only does she describe care given according to Orem's selfcare nursing model but also she illustrates that the nurse need not always wait for the client's psychological readiness to emerge but may induce it by an apparently premature demand on him to begin his own selfcare.

Although Orem (1971) holds that nursing practice is only valid when the nurse's ability to manage and maintain therapeutic systems of selfcare exceeds that of a client, it is the contention of this present writer that nursing practice is also valid when a person in good health and without selfcare disability consults a nurse regarding ways to enhance or extend an already satisfactory health status.

The nurse as client educator

Patient education has in the past been the Cinderella of the nurse's job list. Traditionally it has not been the hospital nurse's responsibility, yet nurses need to take on a teaching role as well as a caring/curing one (Hood and Farmer, 1974; Conant, DeLuca and Levin, 1972). Schweer and Dyani (1973) protest that teaching a patient should be as important a part of a nurse's daily assignment as any other treatment, and they claim that an immediate change to this perspective is necessary. This is especially true because many individuals lack a knowledge of the selfcare practices which can contribute to health (Kinlein, 1977). Smith (1979) calls for a 'missionary zeal' on the part of nurses to develop health education strategies. The emphasis on health will require that the nurse's role incorporate preventive and educational emphases and a different sort of ability - that of nurturing independence in the client.

Levin (1978) distinguishes between patient education and selfcare education saying that whereas patient education focusses on what the professional thinks is good for the patient, selfcare education is determined by what the client perceives are his needs and goals. Selfcare education, unlike patient education, does not foster dependency or assume sickness, is anticipatory rather than reactive, and includes ways of modifying the environment. It relies on existing skills and autonomous self-healing and assumes that selfcare practices are appropriate.

The aim of selfcare education is to offer additional technology and options within the context of the current health behaviours to the client or citizen who, according to Levin et al. (1976) should have increasing access to high quality information and technology. This is especially true at this time when there is a currently pressing need for education for health and for a better informed laity (Reinken et al., 1980). Pybus and Thomson (1979) have pointed out that for health education to be given most effectively it is necessary to know about people's levels of awareness about health and about the things that threaten their health. To this end innovative methods have been used by nurses. These include giving health teaching in the laundromat (Eggebroten, 1973), writing a weekly health column for a daily newspaper (Knollmueller, 1973) and setting up health conferences for senior citizens (Anderson and Andrew (1973)). Not to be neglected as recipients of selfcare education are 'anchor' persons - that is, significant others such as family members and friends (Bromley, 1980).

Selfcare education need not be confined to adults. Children deserve this sort of education and are good candidates for it whether their status is that of a recipient of nursing care proper, or of health education (Butterfield, 1976; Milio, 1976 a; Levin et al., 1976). That children can be effective as selfcare agents has been amply demonstrated by Lewis (1974) whose approach encouraged school children when ill to initiate their own health care. These children were asked to diagnose their problems and to decide on a course of treatment using the school nurse as a source of information but not as a decision maker. In another study

in the same situation (Lewis, Lewis and Ifekwunigwe, 1978) where the children used the school nurse as a resource a study was done in which informed consent for influenza vaccination was obtained from the children as well as being requested from their parents. The children were aged from six to nine years of age. However of the 54% of children who agreed to participate in the vaccination program only 15% had parents who also gave consent.

Facteau (1980) recommends that the nurse deliver health teaching to children so that their selfcare agency can be increased. Bellaire (1971) describes how the health service division of Denver Public Schools ran a clinic which engendered responsibility for health maintenance among teenagers. The final step in this service was the formulation of individual health care plans by and for the teens themselves. Michael and Sewall (1980) describe the effective role undertaken by a nurse who acted as reality therapist for adolescents who were alcohol abusers. That the child can be an effective selfcare agent is the theme of a handbook (Coley, 1978) which not only describes how a child attains independence in selfcare but also presents an assessment instrument for measuring the child's abilities in activities of daily living appropriate to his developmental status, and outlines the behaviours that precede and affect independence.

Norris (1979) challenges nurses to provide exciting educational selfcare material for children in the same way that they provide suitable selfcare instruction for adults. Examples of nurse-provided selfcare manuals are Goodwin's (1979) programmed instruction for selfcare following pulmonary surgery, Iazes's (1977) workshops for health instruction, and Manfredi, Cassidy and Moffitt's (1977) teaching program for diabetic clients, to name a few.

The nurse as behaviour therapist

It has been claimed (Wallston and Wallston, 1973) that health care education programs can make use of 'internality training' - i.e., of a program of assisting the person to perceive himself as being an effective agent on his own

behalf. One way of increasing a person's internality on locus of control is by a counselling technique developed by Reimanis and Schaefer (1970). This technique consists of challenging or confronting 'external' statements with 'internal' questions' (e.g., "They want me .!/"What do you want?"), of rewarding 'internal' statements (such as stated intentions to act in a constructive manner) and of getting the client to focus on the contingencies of his behaviour and then discussing alternative and self-effective ways of handling the same situation.

Attitudes to the use of behaviour modification in selfcare vary. On the one hand Levin (1976) said that behaviour modification must be set aside, and on the other hand Giglio et al. (1978) commend its use. Green et al. (1977) note that the technology of behaviour modification is increasingly being transferred to the lay public in the form of (for example) self control manuals. Behaviour modification at the present time has become a central strategy in modifying a lifestyle (Hattinga Verschure, 1980). Behaviour modification is not selfcare behaviour unless it is self-administered (as for example in a weight control program where the individual self-monitors and administers his own chosen rewards or deprivations). However it can be used as a way of setting selfcare behaviours in motion (Berni and Fordyce, 1977; LeBow, 1973) and it is useful for those who are already selfcare motivated (Rosenstock, 1974).

Behaviour modification techniques have been shown to interact with locus of control in determining the outcomes of treatments. In a study by Best (1975) and in another by Best and Steffy (1975) in which smoking withdrawal procedures were tailored to personality and motivational differences it was found that subjects who scored as internal of locus of control responded better to stimulus satiation aversion technique (a personally experienced treatment) and subjects who scored as external of locus of control responded better to a program of situational analysis of the (external) determinants of behaviour. It is important to note that the poorest results occurred when 'internal' scorers received the external treatment and 'external' scorers the experiential treatment, (i.e.,

where the treatment focus was contrary to the subject's locus of control). The writers concluded that tailoring treatment to the subject's locus of control prevents harm rather than does good, a finding which the nurse will need to keep in mind.

Persons who are internal locus of control are more likely to better their state than those who, being external locus of control, have a negative expectancy for success. Due (1970) found that a behaviourally oriented action program was more effective than a conversational re-education program for increasing subjects' internality on locus of control. This has obvious implications for nurses who provide selfcare education. Giving health information on its own without providing opportunities to action selfcare skills is not the best way to educate a patient; the two need to go together. The relationship of 'wanting to do something' to 'trying to do it' is mediated by the ability to effect the action (MacDonald, 1972). Therefore the nurse will not only teach the patient how to perform self-care skills but will reinforce these skills when they occur. Instruction on how to do this is given in the texts of Berni and Fordyce (1977) and LeBow (1973). Nursing care which is aimed at augmenting the selfcare skills of the client will contribute to increasing the client's 'internality' on locus of control.

The client as collaborator

Not only health education but also nursing practice requires to be moulded to the needs of an increasingly participative clientele. In the century that is speeding to meet us, writes Scott (1974) the health care focus will require different skills. For one thing the nurse will need to consider the client's part in decision making concerning his own care and to provide opportunities for him to be so involved.

Involvement of the client as a collaborator in his own care will occur in all cases where the client has some role in such care. Where the client has a total restriction of awareness, and therefore no role, the nursing care will be

wholly compensatory. But where the role is restricted to communicating information, or limited to contributing judgements, or hindered by deficits in selfcare, partly compensatory and/or supportive educative care will be given. In this case both the nurse and the client need to agree about the scope of the nursing responsibility to and for the client, and the dimensions of both their roles. Together the nurse and client will assign priorities for meeting selfcare disabilities, with the nurse acting as a resource in decision making regarding the client's ability to engage in purposeful selfcare. In this capacity the nurse will keep in mind the client's characteristic behaviour in life situations to guide her as she counsels.

Commonly, as shown in a study by Grier (1976), in nursing decision making regarding patient care the entire perspective can be the nursing input, with little suggestion that the client should be in any way involved. By contrast Rogers (1979) describes the way a hospital patient was encouraged to make choices in selfcare behaviour. In a thoughtful discussion of the use of Orem's selfcare theory of nursing to which reference has already been made (p.66), Bromley (1980) mentions that during preoperative counselling the client was assigned responsibility for assessing the factors that were going to influence the performance of selfcare after the ostomy. This is a good illustration of what Lewis (1975) enjoins - namely that the nurse has both the power and the opportunity to make decisions with the patient rather than for him, and that by so doing she will actually contribute to the patient's psychological health. Lewis (1973) also warns, in arguing that the patient has the right to be involved in understanding his health care, that if he is not so involved he will soon turn im-patient.

However Nehring and Geach (1973) believe, on the basis of a pilot study using a questionnaire, that patients are reluctant to make any negative or critical comments about their care. They conclude that nurses ignore the contribution that the patient can make to his own care.

Kasl and Cobb (1966) in commenting on a study by Coser (1956) speculate that whereas a doctor will prefer a patient to have an instrumental orientation (i.e., make suggestions, be autonomous and look forward to renewed activity on discharge) the nurse will prefer the patient to have a primary orientation (i.e., be submissive, offer no suggestions and expect to be passive on discharge). Well may the nurse react to this suggestion because as Norris (1979) points out, nursing was early among the professions to anticipate an ambulatory client who was fully responsible for much of his health care and was fully participating in all aspects of his care. An example of how a client can be involved in his care is given by Hecht (1970) who discusses how clients can be helped to administer their own medication and to do it accurately.

It is important that nurses who use a selfcare model for nursing practice realize the impact of their own reinforcing and sanctioning behaviours, and the need to reinforce successive approximations to the desired selfcare behaviour. In a study by Mikulic (1971) in which nurse-client interactions were analysed in terms of an operant framework, 170 independent and 69 dependent client behaviours were observed. Of the independent behaviours only 25% received positive reinforcement from the nurse; three percent received a negative response and for 72% of the independent behaviours no reinforcement was given. However 88% of the 69 dependent behaviours were positively reinforced. These results suggest that nurses need to reverse much of their customary reinforcing behaviour in order to foster client independence and autonomy. Robinson and Owen (1974) have noted that (institutionalized) patients can become more capable of meeting their own needs when the nurses become less directive and over-protective. Nurses need to guard against the temptation to label as 'bad patient' those clients who do behave independently and who do voice their complaints, for Glogow (1973) has demonstrated that it is these patients who get better more quickly.

The constraints of the Health Care System
on selfcare nursing.

It is ironical that the implementation of selfcare nursing can be constrained by the very health care system in which it is practiced. Mullin (1980) analyses these constraints in terms of the influence they can have both on nursing practice and on the client. The constraints and their results which she identifies are that the health care system focusses on illness rather than on individuals; nursing status and practice therefore is dictated by this orientation, and the client is not treated as a whole self-responsible person. Also the health care system focusses on tasks to be done for the client rather than on a response to the identified needs of that client. Nursing practice is seen in terms of task performance rather than of client support so that the client becomes a passive recipient of more care than is needed and of care which is merely physical in nature. In addition to this the health care system both determines who the caregiver will be on the basis of the tasks that need doing and sets priorities for these tasks rather than basing decisions on the level of professional expertise appropriate to the needs of the client. Nursing autonomy is undermined and the client can be denied educational opportunity and continuity of care. Finally, the health care system structures the nurse's role with the result that nursing accountability is misperceived and the client can be deprived of the opportunity to decide between alternatives for care. This latter point is illustrated by the case of Tuma (1977), a nurse who had her licence suspended for telling a terminally ill patient and his family - at their request - about alternative methods of treatment for cancer. She asks, "If the nurse is responsible for not properly informing the patient, can she also have the authority to be responsible for giving information?"

The effects of the constraints as described by Mullin (1980) can be modified if the nurse, rather than acting as a 'system representative' will adopt a 'client advocate' role and assist the client to negotiate the health care system. This sort of role is commended by Jenny (1979) who justifies it by reference to the patient's rights.

Selfcare nursing within a selfcare culture

The selfcare model for nursing practice is very appropriate not only in its own right but also because it is consistent with the culture of the current selfcare movement. It is not enough to make people knowledgeable about health promoting choices without providing ready access to health promoting options (Milio, 1976 a). A client who no longer needs the care of a nurse has at his disposal a wealth of resources which he can use in his continuing work of health practice. Wellness clinics and self help health care courses (such as were designed by the Australian Commonwealth Department of Health, and the Griffith University of Queensland's School of Environmental Studies' Health Services Research team) are expected to become increasingly available. The media also devote a certain amount of time and space to the presentation of health related material.

Jones (1979) says that the potential of health education via the media has received little attention and he believes that health educators have unrealistic expectations about what contribution the media can make to health education. This apparently pessimistic note can be balanced with the more optimistic belief of Williamson and Danaher (1979, p. 169) to the effect that "most health education flounders on the fact that there is no incentive for the people to whom it is aimed". (Some economic incentives were discussed on p. 12 of this present study.) Williamson and Danaher say that the problems faced by health educators are that scarcely anyone seems to believe in health education, that people know what the health hazards are but still continue their detrimental habits, and that health education is not necessarily supported by doctors (ibid, p.140). If the citizen has been a client of a selfcare oriented nurse it can be expected that for such a client these problems will be reduced because the nurse, being in a position to give health teaching, will have fostered selfcare behaviour in its varied forms at the 'teachable moment'.

Reference to the components of the selfcare model (p. 9 of this present study) will make it clear that there is no component of selfcare which can not be a legitimate focus

of teaching, or resource appropriation, or skill transfer, for the nurse who uses the selfcare nursing model. The nurse, whose self-image is that of a professional who has the role of facilitating the client's progress towards fully responsible selfcare, will contribute to the dyadic consultative relationship which is so necessary in self-care nursing. Acting as a client advocate she will also have helped the client to participate effectively in the health care system.

Thus the use of the selfcare nursing model prepares the client to explore and use the resources of the selfcare culture. This individual will then transfer from being a client in a nursing context to be a citizen in a life-context which is informed by the same philosophy - the culture of selfcare for health.

ENABLING OR INHIBITING FACTORS

It will be recalled (see p. 52) that the client's readiness to engage in selfcare is expected to be influenced by four particular factors. These will now be discussed in turn.

Perception of Health

From the discussion of Health (Chapter 2 of this present study) it will be remembered that health may be defined in negative, in positive, or in neutral terms. Baumann (1961) found that clinic patients used their own health status as a referent for defining health and that medical students were influenced by their perceptual set. Herzlich (1973) described two types of positive wellness, Reserve of Health, and Equilibrium. The latter state (cf. p.45) consists of an experience of wellbeing which in turn has been found to be associated with a perception of Locus of Control as 'internal' (Hersch and Scheibe, 1967).

Herzlich (1973) has suggested that for some people health behaviours correspond to preferences. But when necessity imposes a health behaviour then what arises is not a preference but a health discipline because the measures have become part of a body of rules. Where this is the case

the individual may derive satisfaction consequent upon 'obedience', or reassurance from doing something effective, but will not get the pleasure from his practices that he would get if they were personal preferences.

It is proposed that a person's perception of health will be associated with his perception of Locus of Control and his Selfcare propensity, and that these will in turn influence his perception of health.

Propensity for selfcare

"If (health professionals) believe that people must assume responsibility for their own health and selfcare activities then it is incumbent on (them) to use health education approaches .. to accomplish this. Health behaviour models (are) useful in this task" (Hardy and Conway, 1978; p.216). Two categories of models will be mentioned. One is the Value Expectancy category and the other is that of Behaviour Modification. Three Value Expectancy models are the Health Belief Model (Hochbaum, 1958; Rosenstock, 1966), Rotter's Social Learning Theory (1966), and Jaccard's Social Psychological Model (1975). The Health Belief Model is based on the belief that behaviour is dependent on the value that an individual places on a given outcome and his estimate that a particular action will secure that particular outcome. This model is concerned primarily with care-seeking behaviour. It proposes that the perceived seriousness, perceived susceptibility, efficacy of treatment, presence of cues and absence of barriers to action, are important in determining specific health related behaviours. The Health Belief model is supported by studies which illustrate specific care-seeking behaviour rather than such general selfcare behaviours as have been described earlier in this chapter.

Rotter's Social Learning Theory proposes that people develop expectancies concerning the amount of control that they believe they have over the reinforcements they encounter from day to day. Hardy and Conway say that "in all probability, belief in personal control will find its niche as one of several predictors of health related behaviour" (Hardy and Conway, 1978; p.222). Jaccard's model holds

(in part) that a health related behaviour is determined by an individual's beliefs about the consequences of performing a particular behaviour and the value to him of the consequences. This model ascribes a major role to the influence of support systems.

In the Behaviour Modification model certain behaviours are targets for change. This change is effected by systematically altering the behaviour consequence contingency.

The model which the present writer presents (Figure 3 - 1, p. 78) is not a 'why get help?' model like the Health Belief Model but a 'why get health?' model. There is a need for a model which will describe why and how persons both become selfcare practitioners and advance beyond health to high level wellness. In this model selfcare practices are based on knowledge and subdivided into harmful, helpful, and harnessed behaviours. ('Harmful' selfcare is not a misnomer. Orem (1971, p.20) says that selfcare .. though well intentioned may not be therapeutic.) In the model the universal and health-deviation category has two divisions, one of which adds self help group membership and political health-related activities to universal and health-deviation selfcare activities. The tripartite arrangement progresses from minimum to moderate to maximum selfcare activity. Each of the three subdivisions is linked to a different health level.

Minimum selfcare may be based on either rational or irrational 'knowledge' and can be either helpful or harmful. Although it is purposeful it is labelled as habitual, and described as being outside awareness. It can contribute either to health reduction, health restoration or health maintenance.

Moderate selfcare includes all four areas of selfcare discussed earlier in this chapter (p. 52ff). These selfcare practices are deliberate and contribute to health restoration or maintenance. This subdivision is labelled volitional. In line with Rotter's theory this behaviour will, through its positive consequences, contribute to a belief in personal control in health matters. This perception of control will in turn contribute to health itself

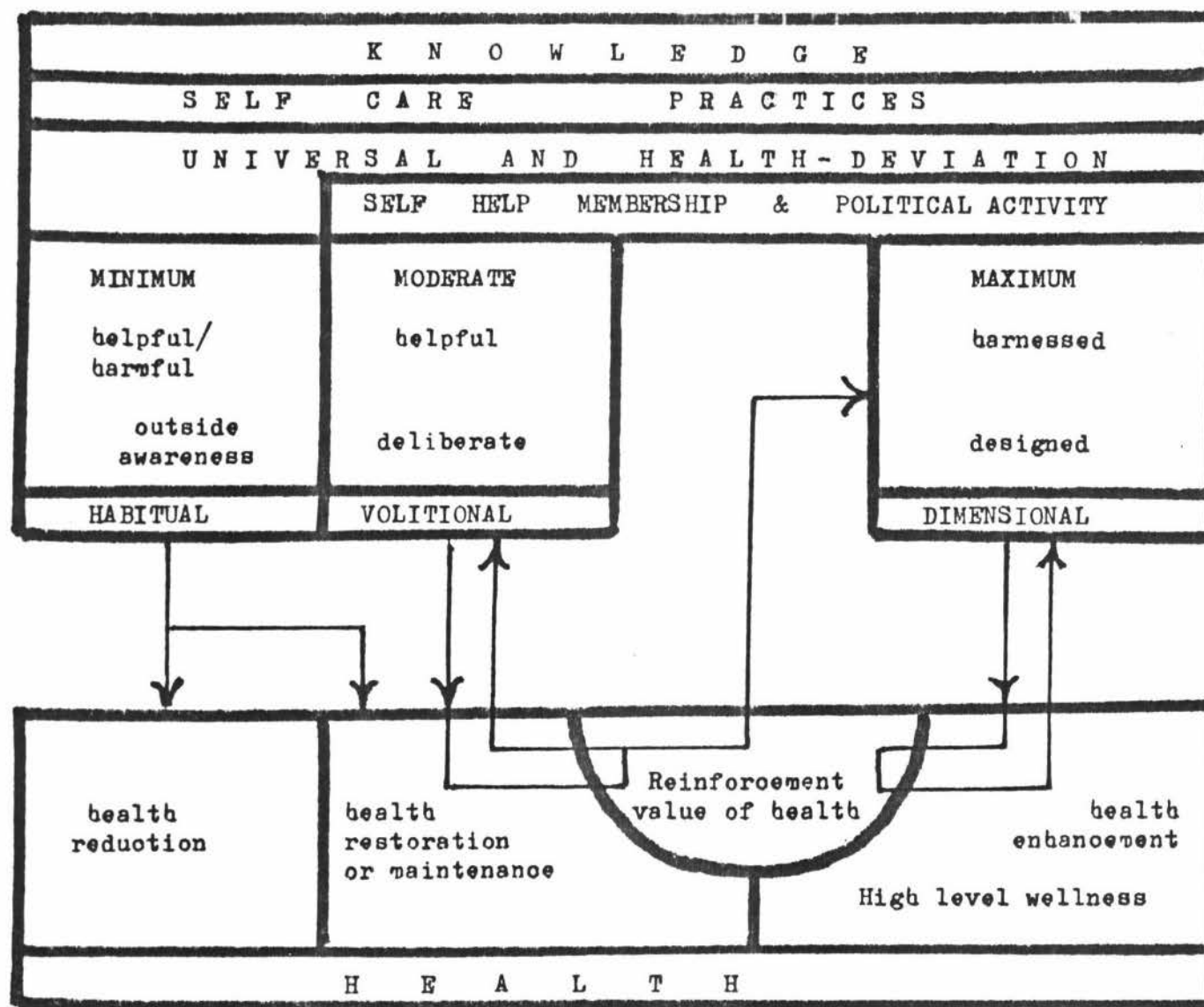


FIGURE 3 - 1 : Relationships between selfcare practices and health

being perceived as a reinforcing contingency. This is consistent with Jaccard's theory that the beliefs concerning health and the value of consequences will be a determinant of health related behaviour. It is also consistent with behaviour modification theory in that the behaviour consequence (improved health), having become the reinforcer, will contribute to an increase in health behaviour. Once the consequences for health of selfcare behaviours become a reinforcing contingency a shift from moderate to maximum selfcare can occur. Girdano and Everly (1979) illustrate this in relation to the use of the relaxation technique. They say that a person's motivation-for-health level can change from level 2 to level 3 (i.e., motivation to enjoy healthy behaviour as opposed to motivation merely to prevent illhealth) as a person becomes gratified by relaxation and the technique is repeated because it has become rewarding in itself.

Maximum selfcare is selfcare harnessed to secure high level wellness. In this subdivision the person designs his own health program in order to enhance his health. This program will feature the five basics presented by Ardell (1977) namely self responsibility, nutritional awareness, stress management, physical fitness and environmental sensitivity, and they will be employed in Ardell's terms.

It is proposed that a person's selfcare propensity will develop from minimum to moderate as his needs to be asymptomatic and to have functional ability are met. A need to experience wellbeing will begin to be met when the person moves into the maximum selfcare area.

Perception of Locus of Control

The construct of Locus of Control (Rotter, 1966) is a theory that persons who see themselves as being responsible for the outcomes of their encounters with the world behave in a fashion observably different from that of persons who see themselves as creatures of circumstance. Persons with high levels of perceived internal control tend to see themselves as being able to determine the outcomes of their encounters with the world, in contrast to those with low

levels who tend to believe that random circumstantial events determine their actions.

Internal control is associated with such concepts as autonomy (Erikson, 1959; Havinghurst, 1963), competence (White, 1959; Neugarten, 1963), taking social action (Gore and Rotter, 1963), achievement motivation (Atkinson and Feather, 1966; McClelland, Atkinson, Clark and Lowell, 1953), and coping with stress (Fisher and Strantz, 1974). It is negatively associated with hopelessness and powerlessness (Seeman, 1959). Palmore and Luikart (1972) found self-rated health, organizational activity and internal control, in that order, to be the most important variables in life satisfaction. "Internals" - persons who see themselves as being able to determine the outcomes of their encounters with the world - in contrast to "externals" have been found to show a greater tendency to seek information (Wallston, Maides and Wallston, 1976), and to process it, and also to adopt behavioural patterns which facilitate personal control over their environment (Lefcourt, 1966; Phares, 1976; Fines, 1973; Strickland, 1977). Hersch and Scheibe (1967) found internal locus of control to be associated with the experience of wellbeing and with positive self descriptions. In their study subjects described themselves as active, striving, powerful, achieving, independent and effective.

Gochman (1971 b) held it to be likely that the degree to which a person sees himself as able to control various aspects of his world should bear some relationship to his beliefs about health and illness. In his 1971a study Gochman used children as subjects and investigated the relationship of health problem expectancy and locus of control. He found perceived internal control to be inversely related to health problem expectancies and directly related to uncertainties within these expectancies. In his 1971b study, with children again being the subjects, he investigated the relationship between perceived vulnerability and locus of control, and found perceived vulnerability to health problems to be inversely related to 'potential health behaviour' in persons with high perceived internal control and directly related to 'potential health

behaviour' in persons for whom health was salient.

Kirscht has pointed out that although many different behaviours have been examined in relation to the concept of locus of control, health beliefs and behaviours have failed to receive much attention. Since "many health actions depend on voluntary behaviours and many health programmes are predicated on an assumption of controllability, people's expectancies concerning control seem a potentially worthwhile area of investigation" (Kirscht, 1972; p.225). Kirscht expected that beliefs in controllability would be associated with beliefs that health problems can be overcome, with preventive health behaviours and with interest in information about preventive health behaviour, but found little support for the assumption that control of health would be an aspect of general control of events. However when he separated his control items into 'expectancy' and 'motivation' classes he found 'expectancy for control' to be positively related to education level and strongly associated with the belief that general health is protectable, and 'motivation for control' to be related to 'perceptions of reduction in vulnerability to specific diseases via personal action' and to 'reported health practices'. From these findings Kirscht concluded that "until we can better specify the important dimensions (of health and illness) it may not be possible to assess the role of belief about control in relation to specific health relevant content" (ibid, p.235).

The question as to whether a generalized expectancy for control is related to a health expectancy of control has been posed by Hunter, Swain and Allen (1978). Expectancy for control, they say, has implications for preventive health behaviours as well as for compliance with medical regimens.

In a 1977 study dealing with preventive health behaviours (PHBs) Langlie defined two types of behaviours namely Indirect Risk PHB (which includes seat belt use, immunizations, nutrition and exercise behaviour, medical checkups, dental care and screening examinations) and Direct Risk PHB (which includes driving and pedestrian behaviour,

personal hygiene and smoking behaviour). She found appropriate indirect risk PHB to be related to perceiving that one has some control over one's health status and that benefits of preventive action are high and/or costs are low, and to belonging to a social network characterised by high socio-economic status and frequent interaction between non-kin. Appropriate direct risk PHB was found to be strongly associated with older age and female sex. Persons who consistently and appropriately engaged in both types of PHB tended to have a high socio-economic status, to interact frequently, to have a positive attitude towards providers of care, and to be older, female, and 'internal' on locus of control. Those who did poorly on both types of PHB had an opposite set of characteristics. Langlie comments that research has virtually ignored the incentives and disincentives to engage in PHB that are provided by the health care system.

Kearney and Fleischer (1979) found a positive correlation between self-esteem and selfcare agency. Persons who scored higher on selfcare agency were self confident, achievement oriented, outgoing and assertive. These are characteristics which are associated with 'internality' on locus of control.

Janis and Rodin (1979) in discussing perceived control emphasize that control processes are important in dealing with the choice of, and commitment to, health relevant behaviour in general. Exercising control and taking personal responsibility has beneficial effects for those persons who do not feel over stressed by such a course. Adherence to preventive health measures, they say, might be (enhanced through) increasing perceived control by encouraging people to be more active in making choices and implementing decisions. Feelings of personal responsibility are important for sustaining behaviour change.

Ievin (1976) in discussing the research challenges of selfcare suggests that observations of selfcare-practicing clients' self confidence vis à vis their physicians, using the concept of locus of control, would be of signal relevance in assessing the mutuality or dominance in the professional-client relationship. It would seem by

implication that clients need to be 'internal' on locus of control to be effective selfcare practitioners.

Kush Goldberg (1979) on the basis of work done by Strickland (1977) - who suggested that those having high internality on locus of control would be more likely to display behaviour which would promote health maintenance than those who were 'external' - expected to find that self help group members would score more highly on 'internality' than users of traditional services. Contrary to expectation she found self help members to be more 'external' on locus of control than users of the traditional services.

Perceived location of
Blame for illness

Twaddle and Hessler (1977) in discussing assumptions of causality say that disease or illness may be seen as being 'voluntary' (personal carelessness or fault), the result of 'natural causes' (personal bad luck), or due to 'sin' (one's due deserts for personal fault). 'Voluntary' illhealth consists of those types of illhealth which the sufferer could have avoided and 'naturally' caused illhealth is presumed to be beyond the sufferer's control.

Wu (1973; p.18ff) catalogues theories of causation of illness as Primitive, Medical, Ecologic, Equilibrium and Social. In the Primitive model an autonomous external force or being, either metaphysical (luck, God, demons) or scientific (germs, botanical pathogens) brings illness to a passive and/or 'punished' victim. The Medical model describes illness as a personal condition consisting of an aberration, either genetic or acquired, of normal body structure or function. In the Ecologic model illness is the result of an environmental insult upon a susceptible person. The construct for this model is an interaction between agent, host and environment. The Equilibrium model describes illness as a maladaptation by the person to some stressor. In the Social model illness is a status in which there is a disturbance in one or more spheres of the individual's capacity to meet minimum physical, psychological or sociological requirements for functioning which are appropriate to that person's sex and developmental

level. The Social model, properly speaking, is not a model of illness causation but of illness result. To summarise, the Medical, Equilibrium and Social models focus on the state of the person, the Primitive model on something external to the person, and the Ecologic model on the interaction between the person and something in the environment.

Lamy (1964) in distinguishing three targets where blame for illness can be located reflects the three areas described by Wu. The three areas are personal state, environmental insult, and interaction between these two. Some examples of causes or conditions belonging in each of these three areas are presented below.

Types of cause of illness

Personal factors. Sources or conditions which contribute to illhealth are age, sex and socio-economic status (Moss, 1979), marital status (Syme, 1974), marital incompatibility (Hochstim, 1968). Defective body parts or inherited conditions or failure in growth and development are cited by Luckmann and Sorensen (1974). Further factors are poor nutrition (Graham, 1974), isolation (Insel and Moos, 1974) and status change. Behaviour patterns (i.e., lifestyle - Reinken et al., 1980; Gair, 1980) include drug abuse (Jamaan, 1971), life change (Rahe, Biersner, Ryman and Arthur, 1972), lack of exercise (Pratt, 1973), lack of rest and poor hygiene, smoking (Mechanic, 1972), lack or misuse of recreation, and driving behaviour (Lalonde, 1974). Personality factors include limits of coping ability (Cohen, 1979), the mode of cognitive appraisal (Moos, 1979), the mode of information processing (Totman, 1979), emotional arousal of anger and aggression (Hokanson and Burgess, 1962), hopelessness (Kowal, 1955), discontent (Moldofsky and Chester, 1970), and frustration, motivation and volitional factors such as achievement drive (Wardwell, Bahnson and Caron, 1963), lack of life goals (Jamaan, 1971), lack of commitment to ideals (Totman, 1979), learning history and maladaptive responsiveness (Moss, 1973). Stone (1979) says that the effect of the mind on the body is only now beginning to make an impact on the understanding of illhealth.

Environmental factors which contribute to illhealth (Cassel,

1974; Eckholm, 1977) act as stressors (Selye, 1959; Freeman, 1960). These can derive either from the social or the physical environment. Stressors identified in the physical environment include architectural design and the arrangement of space (Moos, 1979), aesthetic aspects (Insel and Moos, 1974), crowding and the perception of same (Hamburg, 1971; Wardwell, 1974; McGrath, 1970), city living (Carlestan, 1971), germs (Twaddle and Hessler, 1977; King, 1962), housing (Hinkle and Loring, 1977), noise (Levi, 1971), infrasound (Moss, 1973), pollution (Levi, 1971), the workplace, and the weather (Moss, 1979). Stressors in the social environment (Myager, 1971; Luborsky, Todd and Katcher, 1973) include bereavement (Cohen, 1979), lack of social support (Levi, 1971), status inconsistency (Jackson and Burke, 1965), social unpredictability (Moss, 1979), social change (Gron, 1971), stimulus overload (Insel and Moos, 1974), information overload (Moss, 1979), incongruity (Corson, 1971) and inconsistency (McGrath, 1970).

Multicausal conditions. The era of 'germ theory' (i.e., that a specific unicausal factor is responsible for illhealth) is giving way to the social scientific era in which the multicausality of illhealth is increasingly being recognised (Twaddle and Hessler, 1977). Moos (1979) proposes a synergistic role for environmental stimuli, personal factors and socio-demographic characteristics. In his view attempts to understand health status must focus on the environment, the personal background, personal coping factors and cognitive appraisal, and the interrelationships between these factors, as well as on the external agent. Examples of multicausality are transition states (Rioch, 1971), travel stress (Moss, 1979), job dissatisfaction (Insel and Moos, 1974) and exposure to an extreme environment (Clemenson, 1971). In terms of the Ecologic model every illhealth condition can be said to be due to a combination of factors. A heavy chest cold, for example, could be attributed to being insufficiently clothed and 'run down' at a time when there was a sudden unexpected change in the weather and in a situation where shelter could not be secured.

Relationship between perception
of blame, and selfcare.

Health and healing practices are inextricably linked to attribution of causation of illness. All such attributions have the result of placing information in a cause and effect context (Janis and Rodin, 1979). For example, as long as 4000 years ago the Egyptians "attributed many illnesses to invasions by worms and therefore practiced hygienic measures of cleanliness that may or may not have had recognisable relationships to the prevention of such invaders" (Stone, 1979; p.3). Likewise where illness was attributed to the anger of the gods, or to demons, magic or exorcism were the treatments of choice. More recently Iowa farmers were found to prefer chiropractors to physicians because of their tendency to attribute symptoms to injury or physical strain rather than to (external) germs or (personal) internal dysfunction (McCorkle, 1961).

In a review of studies about the effect of beliefs on health behaviour it is suggested that "beliefs about the etiology of disease .. are related to group membership, (e.g., socio-economic status, ethnicity, peers, family) .. (Coulton, 1978; p.306). A study by Mabry (1964) illustrates this point. Mabry compared the attributions of cause for 'frequent heavy chest colds' made by rural and urban residents respectively, and found that attributions to situational factors (e.g., place of work) were seldom made by the rural subjects but were quite commonly made by the urban subjects, and that attributions to 'germs', 'viruses' and 'being run down' were more common among rural dwellers than among urban dwellers. Using five illness conditions as stimuli to elicit attributional responses, he found that in general rural dwellers more often than urban dwellers were unable to make any attribution of cause at all, and that overall males were less able than females to make attributions of cause. Also rural respondents seldom considered that physical and emotional symptoms were attributable to interpersonal relationships. Although attribution was mainly made to etiologic or personal factors some respondents did have a rudimentary concept of multiple causation.

People are especially motivated to make causal attributions in conditions of high uncertainty (Gerard and Rabbie, 1961). In conditions of high uncertainty attributions can be erroneous and can be the reason for inappropriate health seeking action. Ability to identify (rightly or wrongly) a cause for illness decreases anxiety, a point which is aptly illustrated by the cartoon presented as Figure 3 - 2.



Figure 3 - 2: Snoopy locates the blame for illness.

("Peanuts": N.Z.Dominion, 9/2/80,
used with permission.)

As Selye puts it, "knowing what hurts you has an inherent curative value" (Selye, 1957; p.260). Also, every cure demands a reason, and even giving a reason can be curative. Attribution errors can occur when people fail to recognise physiologic changes. For example some overweight people attribute overeating to gluttony, family quarrels, or depression when in fact it is due to physiological priming caused by greater basal levels of insulin (Rodin, 1977; Horton, Danforth, Sims and Salans, 1975). Also, some older people attribute physical changes to ageing rather than to situational or social factors, and thus fail to perceive that remedial steps can be taken.

Attribution is said to be modified by the person's perceived locus of control. Janis and Rodin (1977) in considering how patients react when they are 'victimised' by acute or chronic illness suggest that if the environmental factors are believed to be within the victim's own control the victim will blame himself for his own suffering and only

rarely attribute the suffering to chance.

To sum up, the perceived location of attributed blame for illness, which is believed to be related to locus of control, is important in relation to appropriate care seeking and selfcare behaviour. It is proposed that the perceived location of blame for illness will be related to the perceived locus for the cause of reinforcement (as this is understood in Rotter's terms). That is, an individual who is 'internal' on locus of control (i.e., who perceives that events are contingent upon his own behaviour or attributes) is therefore expected to attribute blame for illness to personal (or self-related), rather than to environmental, factors.

CONCLUSION TO PART ONE

SYNTHESIS OF CONCEPTS

As shown in the foregoing review there has arisen within the past decade an emphasis on the selfcare approach to health care, an emphasis which is based on the belief that people can take increasing responsibility for their own health work. The goal of selfcare activity is the restoration, maintenance and enhancement of health. But 'health' is variously perceived by different persons so that its reinforcement value differs from one person to another. The impetus to selfcare is an interest in health and the reinforcement value of health, plus a sense of personal competence in the management of one's own health - that is, 'internality' or locus of control. What is known as locus of control is the generalized expectancy that to a greater or lesser extent a person has control over the reinforcers that occur relative to his behaviour (Rotter, 1966). Those who are 'internal' feel that they are effective agents in determining the occurrence of what, for them, is reinforcing or that contingencies are relevant to their own attributes. The practice of selfcare is believed to be influenced by a person's perceptions regarding health, locus of control and the location of attributed blame for illness (i.e., whether illness is thought to be due to self-related, or environmentally related, factors or to an interaction of these two factors) and the salience to the person of health as a reinforcer. Whether an individual believes that the prevention of illness is under his control may influence what health related behaviours are undertaken (Hardy and Conway, 1978) and may be a function of the sorts of attributions that are made concerning the location of attributed blame for illness.

The emerging interest in selfcare may be an indication that consumers are seeking to regain their eroded autonomy. In the attempt to encourage the practice of selfcare it

should not be assumed that all consumers will be comfortable with, or desirous of, the degree of autonomy inherent in and required by the selfcare approach. If selfcare is to be the aim of health education it must be kept in mind that individuals will vary in their desire for, or readiness to benefit from, such an approach.

STATEMENT OF HYPOTHESES

Hypothesis 1 proposes that scores for Locus of Control will be associated with:

- (i) scores for Selfcare propensity
- (ii) scores for Health Concept
- (iii) scores for Self-related and/or non-environmentally related Blame for illness.

Hypothesis 2 proposes that systematic relationships will pertain between scores for:

- (i) Health Concept and Selfcare
- (ii) Selfcare and Self-related and/or non-environmentally related Blame for illness
- (iii) Health Concept and Self-related and/or non-environmentally related Blame for illness.

Diagrammatically the associations can be represented as shown in Figure 3 - 3, p. 91.

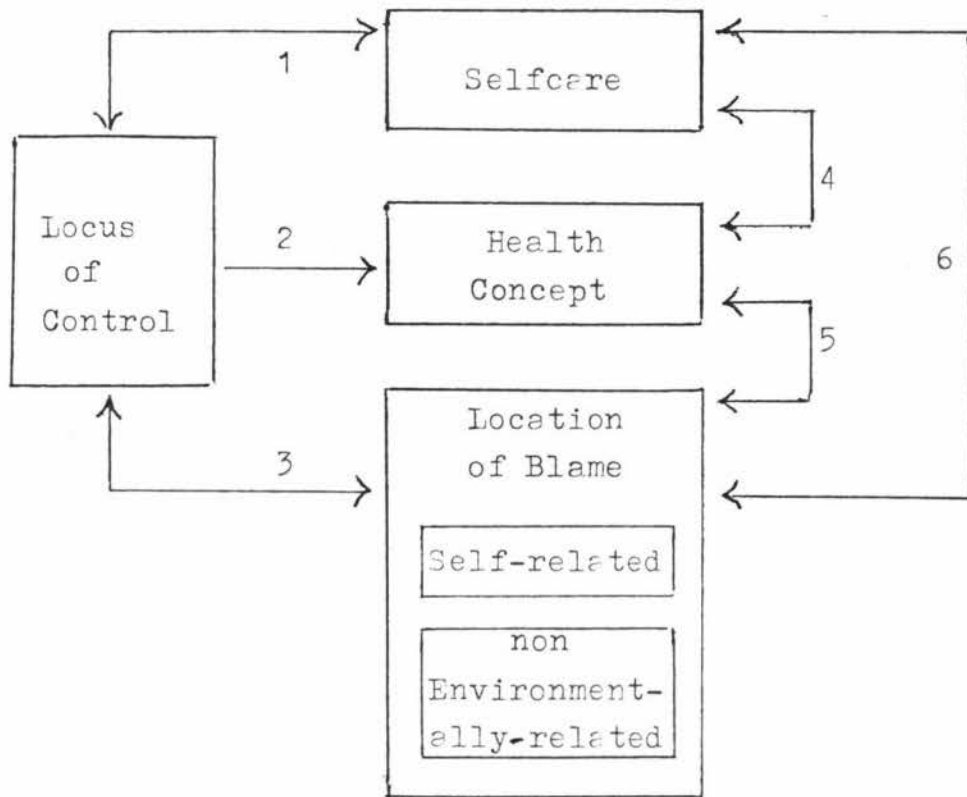


Figure 3 - 3: Expected positive relationships between the four major variables. The arrows 1, 2, 3 relate to Hypothesis 1 and 4, 5, 6 to Hypothesis 2.

P A R T T W O

C H A P T E R F O U R

METHODOLOGYPREPARATION OF DATA GATHERING INSTRUMENTReasons for using a Questionnaire approach

Data were obtained by using a non-interview questionnaire. This procedure is less costly than an interview in terms of time and money for the researcher, and generally more convenient for the respondent. According to Erdos (1970) other advantages of a mailed questionnaire over an interview are absence of interviewer bias, less distribution bias, and a better chance of a truthful and thoughtful reply. The same author lists as criteria for good questionnaire construction: brevity and ease of completion, rejection of questions which could bias answers, and the inclusion of questions which are designed to elicit clear and precise answers. He recommends that the questionnaire should have a professional look and not be printed on coloured paper, and that it should make the respondent feel that he is contributing to an important and useful project. As a general rule closed response questions are preferable to open-ended questions. The first page of the questionnaire should look easy, and the last page should not appear daunting nor overfull, nor should it bear a high number.

The Questionnaire which was devised was called Health Questionnaire (see Appendix A). It was small in size, being 8"x10", and it had no illustrations. It was professionally printed on white, medium weight paper and its space was fully utilized but not crowded, the contents being well laid out and sectionalized. Difficult questions (i.e., questions 7,10,12) were positioned between easy material in the first half of the Questionnaire. These questions were found on pages 2 - 4 of

the 9-page questionnaire. Question 10 of the Health Questionnaire was deliberately open-ended and was, apart from question 12 which required a choice and ranking of three out of 11 given options, the only question which was not a closed response question. The subquestions of the final questions, numbers 17 and 18, were given alphabetical codes so that the last question number would be 18 rather than fifty-five.

Content and format of Questions

Questions were designed to measure the four major variables, Perception of Health, Propensity for Selfcare, Perception of Locus of Control, Location of Attributed Blame for Illness. For the descriptive study some further questions were included to obtain biographical details and information about personal beliefs.

Perception of Health

Questions 5 - 9 in the Health Questionnaire relate to perception of health. Brearley et al (1978) say that far too little evidence is available at present concerning lay definitions of health. Natapoff (1978) notes that only a few investigators have asked respondents to define health. Baumann (1961) found that responses concerning health fell into three categories (for which see p.45 f of this present study) and Herzlich (1973), Wu (1973) and Mechanic (1972) give categories which are consistent with Baumann's.

Question 6 was designed to reflect these three categories. The question asked, "In your opinion which of these three statements best describes health?" and three options were provided from which one response was to be chosen. The three options were:

- 'Having a feeling of real wellbeing'
(labelled FUN hereafter)
- 'Not having anything wrong with you'
(labelled AVOID DISTRESS, or XD)
- 'Feeling "balanced" enough to work and do things'
(labelled WORK hereafter)

The inclusion of the words 'feeling', 'anything wrong' and 'work' respectively in the three response options connected each option to the relevant descriptive category.

Baumann and Herzlich in their studies used open-ended questions to secure a definition of health; the use of given options in the present study was considered to be a more efficient way of securing the respondent's preferred definition.

A similar question to item 6 in the Health Questionnaire was presented to a non-random sample of Palmerston North shoppers (N=46) in June 1980, and yielded results which are shown on Table 4 - 1. Results from another non-random sample (N=98) of visitors to a local Health Fair (1980), and from Pybus and Thomson's (1979) random sample of parents (N=444) who were asked to describe health are also shown on Table 4 - 1.

Table 4 - 1: Percentage of respondents choosing each of the three health orientations.

Study	Health Orientation		
	Feeling	Asymptomatic	Performance
Baumann (1961)			
Clinic patients	31%	31%	38%
Medical students	20%	43%	37%
Pybus and Thomson* (1979)	21%	10%	45%
Health Fair (1980) (non-random)	44%	5%	51%
Shoppers (1980) (non-random)	35%	17%	48%
* Rounded to 100% because in this study other categories accounted for the remaining 24% of the responses.	28%	13%	59%

Question 5 in the Health Questionnaire was closely related to the health definition question and asked, "In your opinion what is the main reason why people want good health?" The

three given options from which a reply could be chosen were essentially the same as for the health definition question, but were worded differently. The three options were:

'For the exhilaration and opportunity it affords'

(feeling orientation, labelled FUN hereafter)

'To avoid the distress of being ill'

(asymptomatic orientation, labelled AVOID DISTRESS, or XD)

'To be able to work and look after themselves'

(performance orientation, labelled WORK hereafter)

It was expected that the respondent would choose the same category of option for both questions 5 and 6, (i.e., to describe health and for wanting health), and that this would confirm that health is consistently perceived in one particular way.

In Question 7 the perception of health was assessed by the use of the semantic differential technique (Snider and Osgood, 1969). In this technique certain adjective pairs have been found to fall consistently into clusters regardless of the concept to which all the adjective pairs refer. These clusters are called 'factors' and the three factors which maintain the most stability are called major factors and are labelled Evaluation, Activity and Potency respectively. Schwirian and Kisker (1977) used Snider and Osgood's technique to distinguish shifts in health perception by nurses who had undergone nursing training. Following training shifts towards a more positive concept of health occurred on all three major factors, the shifts in Potency and Activity being statistically significant. Thirteen of the 15 scales used by Schwirian and Kisker are used in question 7 to provide an index of "intensity" of health concept. The components 2,6,8 of question seven form the Evaluation factor, 7,9,13 the Potency factor, and 3,10, 11 the Activity factor. The remaining components, 1,4,5 and 12, belong to minor factors. The health concept result derived from question 7 being a continuous variable can be tested for association with the other three (major) variables - Locus of control, Propensity for selfcare, Location of attributed blame for illness.

Question 8 invited a subjective health rating. In a recent survey of health behaviour and opinions in the Wanganui region it was found that most respondents defined their health positively (Asher, Fordham and Pitcher, 1979). Similar results were obtained by Dannel and Cartwright (1972). In Baumann's (1961) study clinic patients tended to use their own health status as a referent for defining health.

Question 9 asked how desirable was first-rate health. From questions 8 and 9 a health discrepancy score was derived. "Discrepancy" refers to the extent to which a person's experienced health differs from that person's desired health. A person who is non-discrepant is satisfied with his health whereas one who is discrepant would like to have better health. Hood and Farmer (1974) using Osgood, Suci and Tannenbaum's (1957) semantic differential technique found that high users of the health care system were more consistent than low users in their ratings of six concepts provided in their (1974) study. Two of these concepts were 'health' and 'my health'. High users of the health care system perceived their own health as being important yet evaluated it negatively. Such a response in the terms of this present study would be "discrepant". It was presumed that there would be some relationship between the discrepancy rating and being a user of the health care system, and between the discrepancy rating and the selfcare score (for which see below).

Propensity for Selfcare

Questions 14-18 in the Health Questionnaire relate to self-care status. These questions were designed to gauge the extent to which the respondent was actually or attitudinally disposed towards selfcare practices. The score derived from answers to these questions was expected to reflect the respondent's selfcare propensity. Reference to Figure 1 - 1 on p. 9 will recall the components of selfcare. Each of these components is the subject of one or more questions.

Knowledge seeking and application. The questions 18m (watch health programs on TV), 17u (read health-related articles) and 17t (use of health reference book) relate to knowledge seeking; 17q (no ticketed driving offence), 17d (sleep on firm mattress) and 18a (use of seat belt) refer to knowledge application. Langlie (1977) found associations between both social network and driving behaviour with preventive health behaviour- thus the inclusion of 17q.

Health Maintenance. Health behaviour is individual, voluntary preventive action (Green, 1971; Wu, 1973). Items relating to health maintenance were either furnished or suggested by Williams and Wechsler (1972), Langlie (1979), Orem (1971) and Steele and McBroom (1972). Minkler (1978) in studying the elderly found a significant gap between health knowledge and health behaviour, but Pearman, using a non-specific sample, found remarkable consistency between health intentions and actual health behaviours. Pearman also found higher rates of preventive action among those who had annual medical checkups. It was expected that responses to health maintenance questions would accurately reflect the actual health behaviour of the respondent. Health maintenance questions are 18c (adequate sleep), 18f (balanced diet), 18i, 18j, 18k (exercise), 18l (sober driving), 17x (weight), and 17b, 17c, 17f (recreation and social contact).

Disease prevention; Monitoring, Assessing, Diagnosing. Questions relating to these areas were also furnished or suggested by Williams and Wechsler (1972), Langlie (1979), Orem (1971) and Steele and McBroom (1972). Question 17j was suggested by a reading of Englefield and class (1980) and 17g by Siegel's comment (1973) that the attainment of better health may entail willingness to change an entire way of life. Disease prevention questions are 17i and 17h (immunization), 17j (use of iodised salt), 17p (medical checkup), 17v (non-smoker), 18b (dental care), 18d and 18e (moderation in eating and in alcohol consumption), 18g and 18h (hygiene). Question 17g (making life change) related to health assessment, and 17w (keeping a check on weight) to health monitoring.

Self-help group. Question 17e (membership in a health-related group) pertained to this component of selfcare.

Resource seeking. On the basis of Kessel and Shepherd's (1965) study a "consumer" in this present study is one who has consulted a health professional within the previous two years. The criterion used for consumer/non-consumer in Kessel and Shepherd's study was not two, but 8 - 10 years and the assessment done in their study was based on objective records rather than subjective memory recall. In this present study the criterion of two years was chosen because this was judged to be the maximum which could be used when it was necessary to rely upon personal memory. Question 17a is not scored within the selfcare variable but is entered in the description of the respondent; the variable name being "consumer". However it is discussed here in order to give a complete coverage of comment for the section comprising questions 14 - 18 inclusive.

Resource using, and Specifying one's own health needs. Strauss (1976) used "willingness (by the client) to pay professional fees" as an indicator of consumerism, and Levin et al, (1976) speculate about how much cost the individual will take upon himself in his own health care. Questions 17m and 17k (going to chiropractor and dentist) answered in the affirmative suggest that the respondent will seek treatment for which he has to pay a (quite substantial) professional fee.

The pharmacist is an accredited adviser (Darby, 1977; Sharpe, 1979; Danaher, 1979) to whom many requests are made for information about health matters (Linn and Lawrence, 1978) and who, in the opinion of other health workers, should have even more direct involvement with clients (Lambert, Wertheimer, Dobbert and Church, 1977). Williamson and Danaher (1978) see the pharmacist as having a role in encouraging awareness of self-care options among his customers. Question 17c is included to see if the pharmacist's advice is sought by the respondent.

One selfcare precept is that the individual has the right to specify his own health needs and care requirements. From personal communications and from news items it is known that (probably the majority of) persons who attend a chiropractor either would not divulge this information to their medical

practitioner or if they did would find him to be disapproving of this mode of care (c.f. Reinken et al, 1980; p.137). The items relating to specification of personal health needs and care requirements (17m, 17n, 17o - recourse to chiropractor and chemist) reflect two avenues of self-initiated resource seeking.

Care of the self in illness. Siegel asks, "Is the avoidance of risk a sign of health, or is taking a risk a sign of health?" (Siegel, 1973: p.286). Levin (1976) writes that the benefit of selfcare is determining one's own "risk mix". This suggests that people who are selfcare active may be more likely to prefer taking some risk to having over-regimented safety. Glogow (1973) states that compliant patients do not recover more quickly than non-compliant patients, and Levin (1976) takes up this point and says that it is often detrimental to health to relate passively to care providers, and that such behaviour should not prevail among selfcare active persons. Question 15 is designed to assess whether the respondent would prefer taking some risk when it seems appropriate for his own purposes and does not endanger others.

Audit and control of treatment program. The essence of the selfcare movement is control, responsibility, freedom, expanded options and an improved quality of life (Norris, 1979). The selfcare concept "recognises and emphasizes the inherent human attribute of individual domain over one's actions" (Kinlein, 1977: p.598). Selfcare is a matter of personal agency in health care and is the opposite of the passive approach which is often characterised by the expectation that there is an easy "pill-popping" solution to every problem. Question 14 (obesity treatment) is included as a measure of personal agency: it also serves as a measure of dependency on the professional and is relevant also to the next section.

Lay-professional collaboration. Selfcare is based on the premise that the individual will take personal responsibility for his health care (Mullin, 1980; Bennett, 1980; Joseph, 1980). These, and other writers, point out the need for a change from the expectation that the professional be seen as

an active healer with the client being a passive recipient, to a desire for client-professional consultation. This is what Levin (1976) calls an "integrated practice module" and Wilson (1975) calls the "consultative dyadic relationship". Question 16 (client collaboration in treatment decision making) gauges whether the client desires to be active, conforming or passive.

Participation in health-related political decision making. Question 17r (pressure group activity in health related matters) deals with an actual behaviour, and 17s (attending public health-related meeting) relates to an attitude of interest.

Perception of Locus of Control

As has been mentioned (p. 79 f) locus of control is a personality variable which indicates whether an individual is primarily oriented to perceive the outcome of events as being a result of his own control as opposed to attributing them to fate or to control by other individuals or to external circumstances. In his 1972 study Kirscht found that the relationship between beliefs about control over the environment and over health were complicated. He obtained a weak positive relationship between a measure of general control of events and a measure of control of health. On the basis of results derived from two 6-item questionnaires, one for Motivation for control (which pertained to perceptions of vulnerability to disease) and one for Expectancy for control (which pertained to a general belief that health can be determined by personal actions), he differentiated between these two dimensions.

Wallston et al., (1976b) have pointed out that according to social learning theory, locus of control is an expectancy, as opposed to a motivational, construct and it should be measured by expectancy, rather than by motivational, items.

Question 13. The Locus of control instrument used in the questionnaire for this present study consists of four of Kirscht's (1972) expectancy for control items, two of Rotter's (1966) filler items and eight of Rotter's (1966) I-E items, namely 4a,b, 7a,b, (social); 12a,b, and 22a,b, (political). The socially worded items were chosen as a balance to the personally worded items from Kirscht, and the politically

worded items were chosen because involvement in decision making at local and national level is one aspect of the self-care concept. Other items in Rotter's inventory which mentioned 'luck' 'fate' or 'inevitability' were excluded because they were too similar in wording to the four Kirscht items that were used. Rotter's items which related to student status and to leadership were also excluded.

In the locus of control question all items are presented on a 1 - 5 scale. Items from the two sources (Kirscht, 1972 and Rotter, 1966) have been mixed. Externally and internally worded items are equally represented and externally worded items have the scoring scale reversed. The maximum score is 60 and represents the upper limit of the "internal" end of the internal-external dimension of perception of control.

Location of attributed Blame for Illness.

Questions 10-12 in the Health Questionnaire relate to perception of location of blame for illness. They are designed to ascertain whether the respondent perceives himself to be the source or cause of illness, the environment to be the source or cause of illness, or whether illness is perceived to be due to an interaction of self-related and environmental factors.

Perception of cause of illness is salient to health behaviour. Mabry is one of many writers who comment that "conceptions of why illness and symptoms occur often influence what is done about them" (Mabry, 1964: p.371). The matter of interest in this present study, of which one aspect is the investigation of association between perception of locus of control and location of perceived cause of illness, is the extent to which a respondent will select factors from any particular one of the three main areas, (self-related, environmental or interactional), when asked to identify what causes illness.

In a non-random survey of Palemston North shoppers (N=46) respondents were asked to select, from a list of eight given causes, the three most important causes of illness. The causes most commonly chosen were 'body part not working properly' (i.e., self-related) 86%, 'germs' (i.e., environmental) 78%. (These percentage figures indicate the percentage

of respondents who selected the particular item.) Other results were 'being unable to adjust to life conditions' and 'a combination of being under par and getting something' (both interactional) 47% and 41% respectively.

Question 10 in the Health Questionnaire was a projective stimulus question, "If you got the following conditions, what would be the most likely cause or causes?" This question was based on that used by Mabry (1964) who used five 'standard' symptoms (i.e., those most likely to be within the experience of most individuals) derived from answers to the Cornell Medical Index. Mabry found no significant differences between symptom explanations for those who had had the symptom compared with those who had not.

Question 12 provided 11 options (five being 'self-related', five being 'environmental' and one being 'interactional') from which three causes could be selected and ranked. Responses to both questions, 10 and 12, were not scored on the criterion of right/wrong but on perception of cause as deriving from self-related, environmental or interactional factors.

Question 11 is related to questions 10 and 12 in that it gauges the perception of personal responsibility for preventing illness. "It is not obvious whether the occurrence of any disease is (perceived) purely as a chance matter or purely (as) a matter of the person not taking proper actions" (Kirscht 1972: p.226). Janis and Rodin (1979) point out that if a sufferer believes he can control the environment he will blame himself for his (illness) condition. Question 11 asks "When people get the following conditions would it be due to chance or to failure to have taken precautions?" Five illness conditions were then listed. As Mabry (1964) found that there was no significant difference between symptom explanation by those who had had a symptom and those who had not, it was expected that there would be no difference in attributing 'blame' between those who had had, and not had, the illness listed.

Description of Respondent.

Questions 1 - 4 in the Health Questionnaire relate to

biographical details.

Socioeconomic status. The positive relationship between preventive health behaviour and socio-economic status is frequently mentioned in the literature.¹

Minkler (1978) in a study of 755 older persons found that socio-economic status had an effect on health knowledge, health attitudes and health practices. Socio-economic status has been found to be related to the perception of susceptibility to illness and to a belief in the efficacy of preventive and diagnostic actions (Kirscht et al, 1966; Hochbaum, 1958). It has also been found to correlate moderately and positively with dental checkups (Coburn and Pope, 1973; Steele and McBroom, 1972; Kasl and Cobb, 1966), with poliomyelitis vaccinations (Coburn and Pope, 1973), with physical checkups (Ross, 1962; Williams and Wechsler, 1972) and with preventive health visits (Rosenstock, 1974). A study by Langlie (1977) found that people who practice preventive health behaviour are of higher socio-economic status, older, female, and have a perceived internal locus of control. She also found that socio-economic status is inversely related to Direct risk preventive health behaviour.

Many explanations for the relationship between socio-economic status and preventive health behaviour have been offered, (e.g., Green, 1971; Rosenstock, 1969; Wilson, 1970). Bullough (1972) found that socio-economic status was related to a feeling of powerlessness which in turn was related to health behaviour. It is a frequent contention that lower socio-economic groups experience generalized feelings of powerlessness, which in turn is said to be associated with apathy and inactivity and the lower likelihood of preventive health behaviour (e.g., Coburn and Pope, 1974). Powerlessness is the reverse of expectancy for control which is associated

¹ See Hochbaum, 1958; Haefner, 1967; Mechanic, 1968; Nikias, 1968; Kasl and Cobb, 1966; Rosenstock, 1964, 1969; Kegeles, 1963; Rosenfeld and Donabedian, 1958; Yankauer, 1961.

with the belief that general health is protectable (Kirscht, 1972). Lower classes are more likely to attribute life occurrences to 'luck' (Brearley et al, 1978). Coburn and Pope (1974) in seeking to understand the socio-economic/preventive health behaviour link observed that education, age and income - in that order - provided the most parsimonious set for predicting preventive health behaviour and for explaining about 50% of the variance of socio-economic status on preventive health behaviour.

McKinlay and Dutton (1974) in discussing the relationship of salience of health to different social groups catalogues several studies which deal with the contention that lower social class persons are less 'concerned' about their health and its maintenance. They cite Koos (1954) and Zborowski (1958) who reported that health is more salient to the upper socio-economic classes. However McKinlay and Dutton say that this view is challenged by more recent evidence. Perhaps health education programs have contributed to health being more salient for the lower classes now than it was 20 years ago.

Coulton (1978) in a discussion of studies dealing with socio-cultural characteristics of individuals comments on the consistent relationship found between socio-economic status and preventive health behaviour and concludes that socio-cultural factors influence health beliefs of individuals, and that this in turn affects health behaviours.

Some studies (e.g. Milio, 1975; Strauss, 1962) have shown that the time perspective of the lower classes is confined to the present rather than to future possibilities, and that as the upper stratum takes more account of what might happen in the future its members are more likely to take preventive health measures.²

² See also Coburn and Pope, 1974; Rosenstock, 1966; Simmons, 1958; Green, 1971.

Not only is socio-economic status related to preventive health behaviour but it is also related to health status (Dennison, 1972; Grossman, 1972; Renne, 1974; Susser and Watson, 1971; Giocco, Densen and Horvitz, 1953) and to the use of the health care system (Bergner and Yerby, 1968; Cartwright and O'Brien, 1978; Tuckett and Kaufert, 1978).

In the present study socio-economic status was based on the respondent's occupational category.

Marital status, Age, Sex. Marital status has been found to be related to health (Syme, 1974; Twaddle and Hessler, 1977). Being married is associated with having good health. Age and sex have been found to be related to a perception of susceptibility to illness (Kirscht et al, 1966; Steele and McBroom, 1972). Reinken et al (1980) note that women report poorer health than men. Questions relating to marital status, age and sex were therefore included in the Health Questionnaire.

Variable List

The list of the 19 variables (see Table 4 - 2) includes 13 variables which relate to the descriptive study and six which are used for the testing of the hypotheses. Three of these six variables are major variables and the other three contribute to the fourth major variable. The four major variables are Health Concept (variable 9), Locus of Control (variable 18), Selfcare (variable 19) and Location of attributed blame for illness. This latter variable takes two forms, self-related attribution (variable 14, Self, which also makes use of scores from variable 13) and environmentally-related attribution (variable 16, Environment).

Scoring of Questionnaire

The scoring convention which is presented as Appendix B consists of descriptions of how the 19 variables were scored or coded. A copy of the Health Questionnaire on which the scores and codes have been entered gives a clear demonstration of the convention and is entitled "Scoring Code". See Appendix C .

Table 4 - 2: Variable list.

Questionnaire Question Number	Variable Description	Variable	
		Name	Number
1	Age of respondent	Age	1
2	Sex of respondent	Sex	2
3	Marital status of respondent	Marital	3
4	Socio-economic status, respondent	SES	4
17c	Whether health professional has been consulted within the previous two years	Consumer	5
5	Why do people want health?	Want H-th	6
6	How is health best described?	Describe Health	7
5/6	Matching (or otherwise) of options chosen for questions 5 and 6	Coincidence	8
7	"Intensity" of health concept (Semantic differential)	Health Concept	9
8	Personal health, subjective assessment	Own Health	10
8/9	Discrepancy between own health and desired health	Discrepancy	11
9	Desirability of first rate health	Salience	12
10	Location of blame for illness (projective response)	Inout	13
10/12	Location of blame for illness (self-related). Composite score from questions 10 and 12	Self	14
10/12	Location of blame for illness (multicausal). Composite score from questions 10 and 12.	Synergic	15
12	Location of blame for illness (environmental)	Environment	16
11	Perception of chance v. personal responsibility in semi-preventable illness	Prevent	17
13	Perception of locus of control	Locus	18
14-18	Propensity for self care	Selfcare	19

ADMINISTRATION OF QUESTIONNAIRE

Pilot Study

The first draft of the questionnaire differed in many respects from the final form of the Health Questionnaire. A pilot study was run using the first draft of the questionnaire with a non-random sample of student volunteers, $N=36$. The purpose of the pilot study was to test the clarity and validity of the questions. Two non-projective questions pertaining to perception of cause of illness as self-related or as environmentally related were found to be clumsy and were discarded and a new format was devised. Questions designed to ascertain socio-economic status were discarded, and only occupation was asked for in the final form on the basis of the work of Irving and Elley (1977) and Elley and Irving (1976) who provide a socio-economic index for different occupations for males and females in the New Zealand labour force. Thus as a result of the pilot study the questionnaire was revised and its layout was improved.

Data analysis of the pilot questionnaire results revealed that

- (i) the variable Inout (self-related attribution of cause of illness) correlated with
 - a/ the variable Selfcare, Pearson correlation coefficient
 $r = .288, \quad p = .05, \quad N = 36;$
 - b/ the variable Locus of Control
 $r = .475, \quad p < .005 \quad N = 36.$
- (ii) the variable Inout was predictive of the variable Locus of Control,
 $F(1,34) = 9.915, \quad p < .01: \text{Beta weight} = .475.$
- (iii) Females attributed the cause of illness more to environmentally related factors than did males,
 $\chi^2 = 4.398, \quad p < .05, \quad df = 1.$

The study proper was then conducted with the revised Health Questionnaire (for which see Appendix A).

Subjects

One hundred non-academic university staff members were approached by mail and invited to complete and return the Health Questionnaire which was included in the posting. See Appendix D i for the covering letter. The sample which consisted entirely of employed persons was random and independent. A random and independent sample is one in which the choice of any one subject has no influence on the choice of any other subject. That is, all subjects have the same chance of being included in the sample. The names of non-academic staff members were obtained by deleting names of academic staff members from the university telephone directory's staff listing. (Staff who have no phone are included in the telephone listing under a contact phone number.) The names of non-academic staff members were then numbered from 000 to 607, ($N = 608$). Using the Fisher and Yates (1938) random number table which gives 2-digit numbers from 00 to 99 one hundred and thirty 3-digit numbers were drawn and listed. One hundred and thirty numbers were drawn to allow for duplication of random numbers and for the possibility that an addition to the sample might be required if any subjects declined to participate within the first week of the study.

The procedure used for drawing the numbers was that two numbers in one column and one number adjacent in the next column were taken to make up a 3-digit number. The first number drawn was selected by using the writer's age: the first number of this was used as the column number and the second number became the row number. Numbers were read from top to bottom and columns from left to right. The first number drawn was 460. Nine random numbers were duplications and were discarded. Subjects in the random sample were coded from 001 to 100.

Distribution of Questionnaires. The Health Questionnaire, the covering letter, and an addressed envelope for the return of the questionnaire (by internal mail, so no postage cost was entailed) were sent by internal mail to the 100 subjects on 25/8/80. The covering letter had the subject's name handwritten in and carried a handwritten signature.

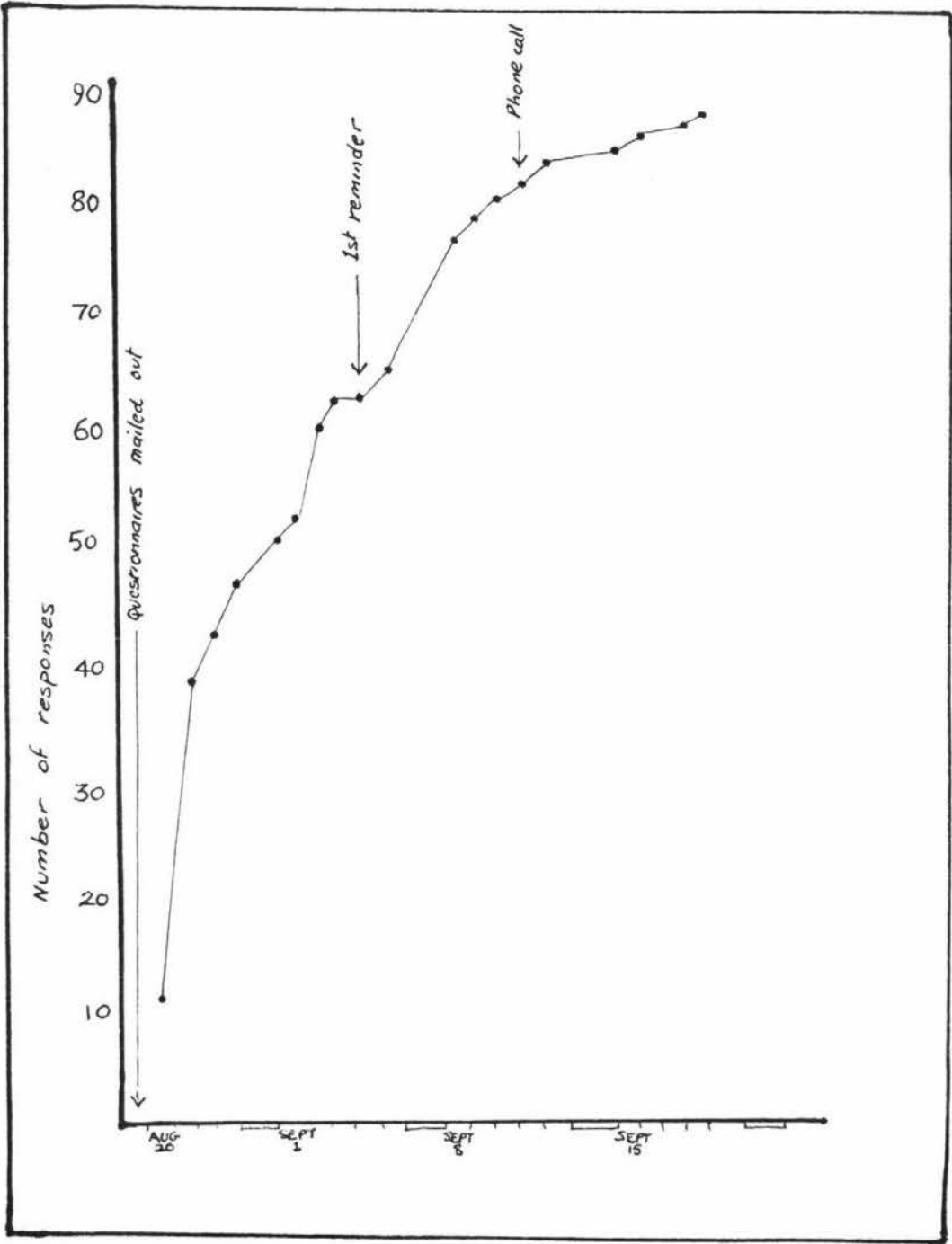


Figure 4 - 1: Return rate of questionnaires

Return of the Questionnaires

Within three days of mailing six subjects replied that they did not wish to participate. Therefore a further six subjects were taken from the random number listing and approached, to restore the N to 100, (true N = 106).

As can be seen by reference to Figure 4 - 1 fifty-nine completed questionnaires were returned in the first week. The first reminder letter (see Appendix D ii) was sent to non-respondents on 4/9/80, 10 days after the first mailing, and the second reminder was phoned on 11/9/80 by which time a total of 80 subjects had returned completed questionnaires. The final return rate was 86. This was 86% of the effective sample (N = 100) and 81% of the true sample (N = 106).

A note of appreciation to respondents appeared in the September 28th issue of the university weekly newsletter, *M_p*. (See Appendix D iii.)

STATISTICAL PROCEDURES

To examine the hypotheses various univariate procedures were initially used. To check more complex relationships multivariate procedures were used. A brief discussion of these univariate and multivariate procedures now follows.

Univariate procedures

Means and standard deviations of variables having interval data were computed. This allowed the calculation of cut-off points for high and low categories of these variables. The high category consisted of those scores which furnished a Z score of $\geq .5$ and the low category consisted of those scores which furnished a Z score of $\leq -.5$. On this basis 31% of normally distributed scores can be expected to be in each of the high and low categories. One exception was the Selfcare variable which had no scores of Z $\leq -.5$. In this case the low category was adjusted to Z $\leq -.45$ and thus included 35% of the selfcare scores. Cut-off points for high and low categories of the variables Environment, Synergic and Prevent were determined on the basis of the distribution of scores. The distributions of these three variables permitted

no other manipulation of cut-off points which would allow comparable percentages in the high and low categories of each variable than that which was used. The percentages of scores in the high and low categories respectively were: Environment, 25% and 29%, Synergic, 41% and 45%, Prevent, 34% and 31%.

Contingency Tables analysis. A crosstabulation was made to examine the joint frequency distribution of cases according to two classificatory variables. A contingency tables analysis (SPSS Program Crosstabs, Nie, Hull, Jenkins, Steinbrenner and Bent 1970) was performed on all 19 variables. For convenience the following convention has been adopted for χ^2 tables:

Ejs for 2 x 2 tables, and goodness of fit table, are shown in the top right hand corner of the cell.

The Ej for pairwise χ^2 is shown between the relevant cells.

The Ej for 1 x 3 comparisons is shown in the left margin of the table.

The Chi Square test (χ^2) was used for statistical analysis of the aforementioned contingency tables. This test determines whether or not two variables are statistically independent or whether a systematic relationship exists between them. The high and low categories of the continuous and ordinal variables (as described above) were used for the calculation of χ^2 .

The criteria for the χ^2 test (Roscoe, 1969) are as follows:
 χ^2 goodness of fit: This is used where there is one sample, where data is nominal or higher order, where there are more than two mutually exclusive and collectively exhaustive categories, where a frequency can be predicted and where Ejs are ≥ 5 .
 χ^2 contingency: This is used where there is more than one sample, where the data is nominal or higher order, where there are independent observations, where the Ejs of at least 80% of the cells are ≥ 5 , and where a theoretical distribution of category values can be calculated.

Calculation of χ^2 :
$$\chi^2 = \frac{\sum \sum (O_{ij} - E_{ij})^2}{E_{ij}}$$

where O_{ij} is the observed value of the cell ij and E_{ij} is the expected value for the cell ij . The $df = (r-1)(c-1)$.

A Bivariate correlation performed between continuous variables provides a single number - the correlation coefficient - which summarises the relationship between two variables. A correlation coefficient indicates the degree to which a variation or change in one variable is related to a variation or change in another variable. As well as summarizing the strength of association between a pair of variables it provides a means of comparing the strength of relationship between one pair of variables and a different pair of variables.

Multivariate procedures

A Multiple stepwise regression analysis was used as a descriptive tool to enable the examination of the best linear prediction equation of one continuous variable from other continuous variables. It is a statistical technique which permits the analysis of the relationship between a dependent variable and a set of independent (predictor) variables.

Factor analysis. In the present study factor analysis was used for its data reducing capabilities. It allowed the examination of the underlying pattern of relationships existing between the items which made up three of the major variables, and the reduction of the content of the variables to a smaller set of items. The three smaller sets can be taken to be the source variables which account for the observed interrelations in the data.

The method used in the present study is Principal factoring with iteration followed by varimax rotation of those factors which had eigenvalues of ≥ 1 (Gorsuch, 1974). This is the appropriate method where factors are inferred - i.e., when it is assumed that the correlations between the items which make up the variables result from an underlying regularity in the data. Use of factor analysis requires, as a rule of thumb, that the number of subjects be at least five times greater than the number (in this case) of items, and that no sample should be less than $N = 100$ (Gorsuch, 1974). In the present study this minimum was not obtained. A similar problem with a small sample was encountered by Baade, Ellertsen, Johnsen and Ursin (1978) who nevertheless performed a principal factor analysis with varimax rotation on data from their samples of 72, 28 and 44 subjects, respectively.

CHAPTER FIVE

RESULTS

The results will be presented in two sections, Hypothesis results and Descriptive results. The Descriptive results will be arranged in four parts:

Further Questionnaire results- major variables and other variables;

Profile derived from Core variables;

Factor Analysis results from which the MiniQ was constructed; and,

MiniQ results.

Figure 5 - 1 (p. 114) displays the associations found between the Questionnaire variables. On the page facing this figure is presented for the reader's convenience a brief description of these variables which are listed in alphabetical order. (For a fuller description of the variables refer to Chapter 4, p. 93 - 105. The interval and crosstabulation data files are presented as Appendices Gi and Gii respectively.)

HYPOTHESIS RESULTSHypothesis 1

which predicted that scores for Locus of Control would be associated with those for Selfcare, Health Concept and Location of Blame for illness found qualified support. As shown on Table 5a the Pearson Product Moment correlations for two predicted relationships were significant at greater than the .05 level and the third reached a level of .06 for both subsections of the variable.

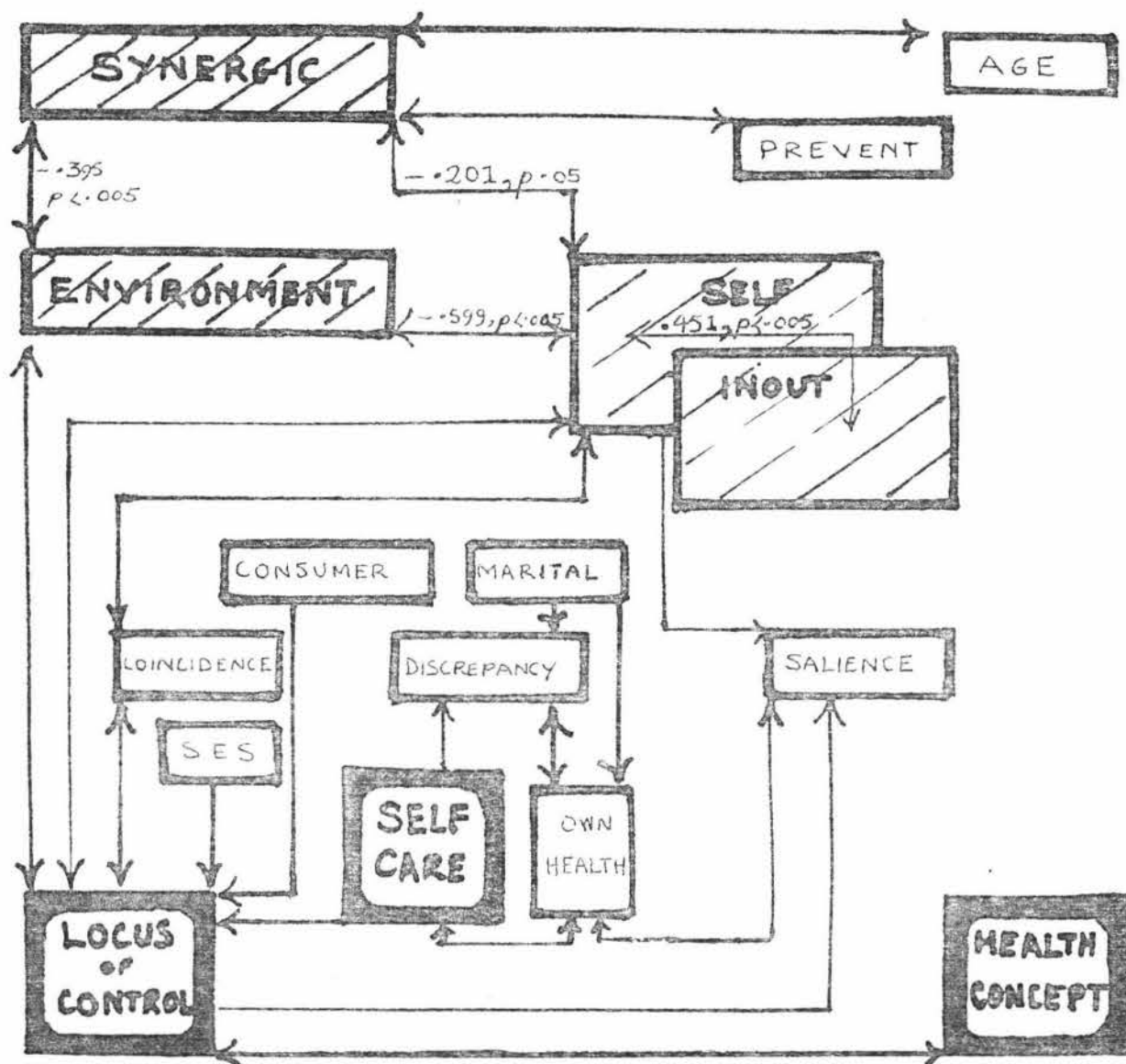


Figure 5 - 1: Relationships between Questionnaire variables

DESCRIPTION OF VARIABLES (Alphabetical listing)

MAJOR VARIABLES: Locus of Control, Selfcare, Health Concept,
(indicated by darker boxing).

Location of Blame: Self, and Environment.

(All four Location of Blame variables-shaded)

Age	Age of respondent.
Coincidence	Matching, or otherwise, of options chosen for Questions 5 and 6. "Coincidence" indicates that the options match.
Consumer	A health professional has been consulted within the previous two years.
Discrepancy	Discrepancy between own health and desired health. "Discrepancy" indicates dissatisfaction with one's own health.
Environment	<u>Location</u> of Blame for illness: Cause is perceived to be environmentally related.
Health Concept	"Intensity" of health concept. A Semantic Differential measurement.
Inout	<u>Location</u> of Blame for illness: Cause is perceived to be self-related. (This variable contributed to the construction of the variable, Self.)
Locus of Control	Perception of Locus of Control.
Marital	Marital status of respondent.
Own Health	Respondent's subjective description of personal health status.
Prevent	Perception of chance versus responsibility in certain semi-preventable illnesses.
Salience	Desirability of first-rate health.
Self	<u>Location</u> of Blame for illness: Cause is perceived to be self-related.
Selfcare	Propensity for selfcare practices and precepts.
Ses	Socio-economic status of respondent.
Sex	Sex of respondent.
Synergic	<u>Location</u> of Blame for illness: Cause is perceived to be an interaction of self-related and environmentally-related factors.

Table 5a: Pearson Product Moment correlation coefficients obtained between the four major variables.

	Health Concept	Self care	Blame for illness Self	Envir/t
Locus of Control	.280	.201	.174	-.173
p	<.005	.03	.06	.06
N	84	86	83	85

However when only the extremes of the distributions (i.e., high and low scores calculated according to the procedure described on p. 110) were examined a somewhat different pattern emerged, as can be seen from the contingency tables 5 - 1 to 5 - 3, (p. 118). This is summarized below.

Locus of Control and Selfcare. The association between ILC (i.e., a high score on Locus of Control) and Selfcare scores persisted. However of the high selfcare scores 17 were ILC and six were ELC. As shown on Table 5 - 1 this disparity did not apply with low selfcare scores.

Thus persons with high selfcare scores are likely to be ILC, $\chi^2 = 5.261$, $df=1$, $p < .03$.

Locus of Control and Health Concept. The association between ILC and Health Concept persisted. Of those who scored high on Health Concept 14 were ILC and five were ELC. Low Health Concept scores numbered five for ILC and 11 for ELC. See Table 5 - 2.

Thus persons scoring high or low on one variable are likely to score similarly on the other, $\chi^2 = 6.352$, $df=1$, $p < .02$.

Locus of Control and Location of Blame for illness.

Results for locating Blame for illness were organized into three parts:

Blame attributed to self-related factors, (variable=Self¹),

Blame attributed to environmentally- related factors, (variable=Environment), and

Blame attributed to an interaction of self- and environmentally- related factors, (variable=Synergic).

The relevant variables for hypothesis testing were Self and Environment.

The relationship between ILC and Blame for illness persisted.

(i) Self-related Blame for illness: In the case of Locus of Control (ILC-ELC) and Self (high-low) the positive relationship again failed to reach significance, $\chi^2 = 3.238$, $df=1$, $p=.08$.

(ii) Environmentally-related Blame for illness: When considering the results for the variable Environment it is pointed out that a low Environment score is analogous to a high Self score and that the matter of interest in this hypothesis is the relationships between high scores on the major variables. Therefore for the purpose of this particular comparison the variable Environment is re-labelled 'non-environment'; High Environment scores have been recorded as 'non-environment:low' and low environment scores as 'non-environment:high'. See Table 5 - 3 and cf. figure 3 - 3 (p. 91).

Of the 16 ILC scores 12 were high non-environment and of the 16 high non-environment scores 12 were ILC. See Table 5 - 3.

¹ The variable Inout contributed to the construction of the variable Self and correlated positively with it, Pearson Product Moment coefficient $r=.451$, $p<.005$, $N=83$. See Figure 5 - 1, p. 114.

Thus persons who are ILC are likely to not attribute blame for illness to the environment $\chi^2=4.000$, $df=1$, $p < .05$, and persons who do not attribute blame for illness to the environment are likely to be ILC $\chi^2=4.000$, $df=1$, $p < .05$.

An extension to Hypothesis 1 was the finding that not Selfcare as conjectured but Locus of Control scores could be predicted from scores for the other three major variables (Health Concept, Selfcare and Self). Multiple regression analysis of these four continuous variables, with Locus of Control being the dependent variable, gave the following results:

$F(3,79) = 4.043$, $p < .05$:

Beta weights, .242, $F(3,79) = 5.252$, $p < .01$,
 .183, $F(3,79) = 3.010$, $p < .05$,
 .166, $F(3,79) = 2.490$, $p < .10$
 respectively.

Hypothesis 2

which predicted systematic relationships between scores for Health Concept, Selfcare and Blame for illness, was not supported. No two variables correlated at a significant level.

Table 5-1: Contingency table for Locus of control and Selfcare scores.

		Locus of control		
		ILC	ELC	
Selfcare	High	17	11.5 6	23
	Low	10	9	

Table 5-2: Contingency table for Health concept and Locus of control scores

		Locus of control		
		ILC	ELC	
Health Concept	High	14	10.3 5 8.7	19
	Low	5	8.7 11 7.3	
		19	16	35

Table 5-3: Contingency table for Environment and ILC scores.

		Non-Environment		
		High	Low	
Locus of Control	ILC	12	8 4	16
	ELC	8 4	7	
		16		

Table 5-4: Contingency table for Locus of control scores and Consumer counts.

		Locus of control		
		ILC	ELC	
Consumer	Yes	32	24.5 17	49
	No	2	4	

DESCRIPTIVE RESULTS

In relation to one of the major aims of this present study, namely to provide a description of health beliefs and practices (cf. p. 3), the following relationships are presented.

1A: Further Questionnaire results: Major variables²

(i) Locus of Control and other variables.

Locus of Control and Consumer. Thirty-two of those who were consumers were ILC and 17 were ELC. See Table 5 - 4, p. 118. As shown on the table consumers score disproportionately as ILC.

Thus persons who have consulted a doctor or professional nurse within the previous two years are likely to be ILC, $\chi^2=4.592$, $df=1$, $p < .04$.

Locus of Control and Socio-economic status. Twenty-eight persons in Elley and Irving's socio-economic brackets 2 and 3 (bracket 1 having no entries) scored ILC and 15 scored ELC. See Table 5 - 5 p. 120. This disparity did not apply for the lower division (brackets 4 - 6).

Thus persons who are in Elley and Irving's socio-economic division which comprises brackets 2 and 3 are likely to be ILC, $\chi^2=3.930$, $df=1$, $p < .05$.

Locus of Control and Coincidence. The nominal variable Coincidence is considered in terms of two categories, coincident and non-coincident. Of the 34 ILC scores 25 were non-coincident and of the 20 ELC scores 15 were coincident. See Table 5 - 6 p. 120.

Persons who score as ILC are likely to choose different categories of option for the two variables, Describe Health and Want Health, and those who score ELC are likely to choose the same category of option, $\chi^2=7.529$, $df=1$, $p < .01$ and $\chi^2=5.000$, $df=1$, $p < .03$ respectively.

² Continuous variables are considered in terms of high and low categories as described on p. 110.

Table 5-5: Contingency table for Locus of control scores and Socio-economic counts.

		Locus of control		
		ILC	ELC	
Socio-economic status	1 - 3	28	15	43
	4 - 6	6	6	

Table 5-6: Contingency table for Coincidence and ILC, ELC scores.

		Coincidence		
		No	Yes	
Locus of control	ILC	25	9	34
	ELC	5	15	20

Table 5-7: Contingency table for Salience counts and ILC,ELC scores.

		Salience			
		1	2	3	
Locus of control	ILC: $E_j=11.3$	11	19	4	34
	ELC $E_j=7$	10	6	5	21

Table 5-8: Contingency table for Selfcare scores and Own health counts.

		Selfcare		
		High	Low	
Own Health	Excellent-Very good (ie, better than good)	26	16	8
	Fair-Poor (ie, less than good)	0	8	

Locus of Control and Saliency. The ordinal variable Saliency is divided into three categories. As shown on Table 5 - 7 p. 120 the ELC scorers showed no marked deviation from the expected value for any one category of saliency.

Persons who are ILC are likely to say that having first-rate health is most desirable (Saliency-2) $\chi^2 = 9.662$, $df=2$, $p < .01$, and those who make this claim are likely to be ILC, $\chi^2 = 6.760$, $df=1$, $p < .01$.

(ii) Selfcare and other variables.

Selfcare and Own Health. All 26 persons who scored high for Selfcare claimed very good to excellent health, and all eight persons who claimed fair to poor health scored low for Selfcare. See Table 5 - 8, p. 120.

Thus persons who score high for Selfcare are likely to report that they have better than good health, $\chi^2 = 26.000$, $df=1$, $p < .001$, and those who report less than good health are likely to score low for Selfcare, $\chi^2 = 8.000$, $df=1$, $p < .01$.

Selfcare and Discrepancy. Of those who were non-discrepant (i.e., were satisfied with their own health) 17 scored high and nine low for Selfcare. On the other hand of the seven who were dissatisfied with their own health (i.e., were discrepant) six scored low on Selfcare and one scored high. See Table 5 - 9, p. 122.

Thus those who score high on Selfcare are likely to be satisfied with their own health, $\chi^2 = 14.222$, $df=1$, $p < .001$.

(iii) Location of Blame for illness and other variables.

Synergic and Prevent. When these two continuous variables are each considered in terms of two categories, high and low, they are found to be positively associated. Fourteen scores were high for both variables and 17 were low for both. See Table 5 - 10, p. 122.

Thus persons who perceive illness to be due to an interaction of causes are likely to strongly believe that if they should suffer certain semi-preventable illnesses it would be due more to a

Table 5-9: Contingency table for Discrepancy counts and Selfcare scores.

		Discrepancy		
		No	Yes	
Selfcare	Low	9	6	18
	High	17	1	

Table 5-10: Contingency table for Prevent and Synergic scores.

		Prevent		
		High	Low	
Synergic	High	14	7	21
	Low	9	17	26
		23	24	47

Table 5-11: Contingency table for Synergic scores and Age counts.

		Synergic		
		High	Low	
Age	35 & over	12	26	38
	34 & under	23	12	35
		35	38	73

Table 5-12: Contingency table for Salience counts and Selfcare scores.

		Salience			
		1	2	3	
Self	High	10	13	8	34
	Low: $E_j=11.3$	16	13	5	

Table 5-13: Contingency table for Self scores and Coincident counts.

		Self		
		High	Low	
Coincidence	No	21	14	35
	Yes	10	20	30
		31	44	65

failure to take precautions than to chance, and persons who believe the illness is due to chance (i.e., score low on Prevent) are likely to not perceive the cause of illness as being due to an interaction of self-related and environmental causes, $\chi^2 = 4.716$, $df=1$, $p < .04$.

Synergic and Age. When both these variables are considered in terms of two categories, high and low for Synergic and 35 and over and 34 and under for years of age, it was found that 26 persons aged 35 and over scored low on Synergic and 12 scored high, whereas 12 persons under 35 scored low on Synergic and 23 scored high. See Table 5 - 11, p. 122.

Thus persons who are aged 35 and over are not likely to perceive the cause of illness in terms of an interaction of self-related and environmental causes whereas persons aged under 35 are likely to do so, $\chi^2 = 8.454$, $df=1$, $p < .01$.

Self and Salience. The continuous variable, Self, considered in terms of two categories, high and low, is compared across the three divisions of the ordinal variable, Salience. Of those who scored low for Self (i.e., did not blame self-related factors as causing illness) 16 were Salient-1, 13 were Salient-2 and five were Salient-3. See Table 5 - 12, p. 122. No deviance from expected frequency occurred across the Salience categories for high Self scorers.

Persons who do not attribute the blame for illness to self-related causes are likely to say that having first-rate health is extremely desirable, $\chi^2 = 10.423$, $df=2$, $p < .01$.

Self and Coincidence. When Self scores are considered in terms of two categories, high and low, and the nominal variable, Coincidence, is considered in terms of two categories, coincident and non-coincident, it was found that of the 35 non-coincident scorers 21 scored high and 14 scored low for Self. On the other hand 20 of the 30 who scored as Coincident scored low for Self. See Table 5 - 13, p. 122.

Thus persons who blame self-related factors for illness are likely to choose different options for the two variables Want Health and Describe Health. On the other hand persons who choose the same option are not likely to perceive the cause of illness to be self-related, $\chi^2 = 6.375$, $df=1$, $p < .02$.

(iv) Major variables and Salience

A bivariate regression analysis of each of the variables Selfcare, Locus of Control, Health Concept and the three parts of the Blame for illness variable (i.e., Self, Environment and Synergic) with the variable Salience showed that none of the major variables could be predicted from the degree of desirability of first rate health.

1B

Further Questionnaire results: Other variables

Marital and Own Health. Of the 52 married respondents 35 reported better than good health, 14 reported good, and three less than good health. This disparity did not occur with the non-married or the bereft. See Table 5 - 14, p. 125.

Persons who are married are likely to report having health which is better than good, $\chi^2 = 30.559$, $df=2$, $p < .001$.

Marital and Discrepancy. The nominal variable Discrepancy was considered in terms of two categories, non-discrepant and discrepant. Twenty-four of the 27 married respondents were non-discrepant and three were discrepant. This disparity did not occur in the other two categories of marital status. See Table 5 - 15, p. 125.

Married persons are likely to be satisfied with their own health, $\chi^2 = 16.333$, $df=1$, $p < .001$.

Own Health and Discrepancy. Of the 26 respondents who reported better than good health, all were non-discrepant whereas all five of those who claimed less than good health were discrepant. See Table 5 - 16, p. 125.

Thus persons who report better than good health are satisfied with their health status and persons

Table 5-14: Relationship between health state and Marital status.

		Own Health			
		Better than good	good	Less than good	
Marital	Not married	13	10	4	52
	Married:Ej=17.3	35	14	3	
	Bereft	4	1	1	

Table 5-15: Contingency table for Marital status and Discrepancy counts.

		Discrepancy		
		No	Yes	
Marital	Not married	6	7	27
	Married	24	3	
	Bereft	2	1	

Table 5-16: Relationship between Own health and Discrepancy counts.

		Discrepancy		
		No	Yes	
Own Health	Ex.- V.G., ie better than G.	26	0	26
	Fair-Poor, ie less than G.	0	5	5
		26	5	31

Table 5-17: Relationship between Own health and Salience.

		Salience			
		1	2	3	
Own Health	Ex.-V.G., ie better than G.	29	20	4	53
	Fair-Poor, ie less than G.	2	2	4	8
		31	22	8	61

who report less than good health are dissatisfied with their health status, $\chi^2 = 31.259$, $df=1$, $p < .001$.

Own Health and Salience.

When the ordinal variable Salience is considered in terms of three categories and the variable Own Health in terms of two categories (better than good and less than good) it was found that 29 respondents who claimed better than good health were Salient-1, 20 were Salient-2 and four were Salient-3. On the other hand of those who claimed less than good health two were Salient-1, two were Salient-2 and four were Salient-3. See Table 5 - 17, p. 125.

Thus persons who report better than good health are likely to say that having first-rate health is extremely desirable whereas those who report less than good health are likely to say that it is fairly desirable, $\chi^2 = 11.780$, $df=2$, $p < .01$.

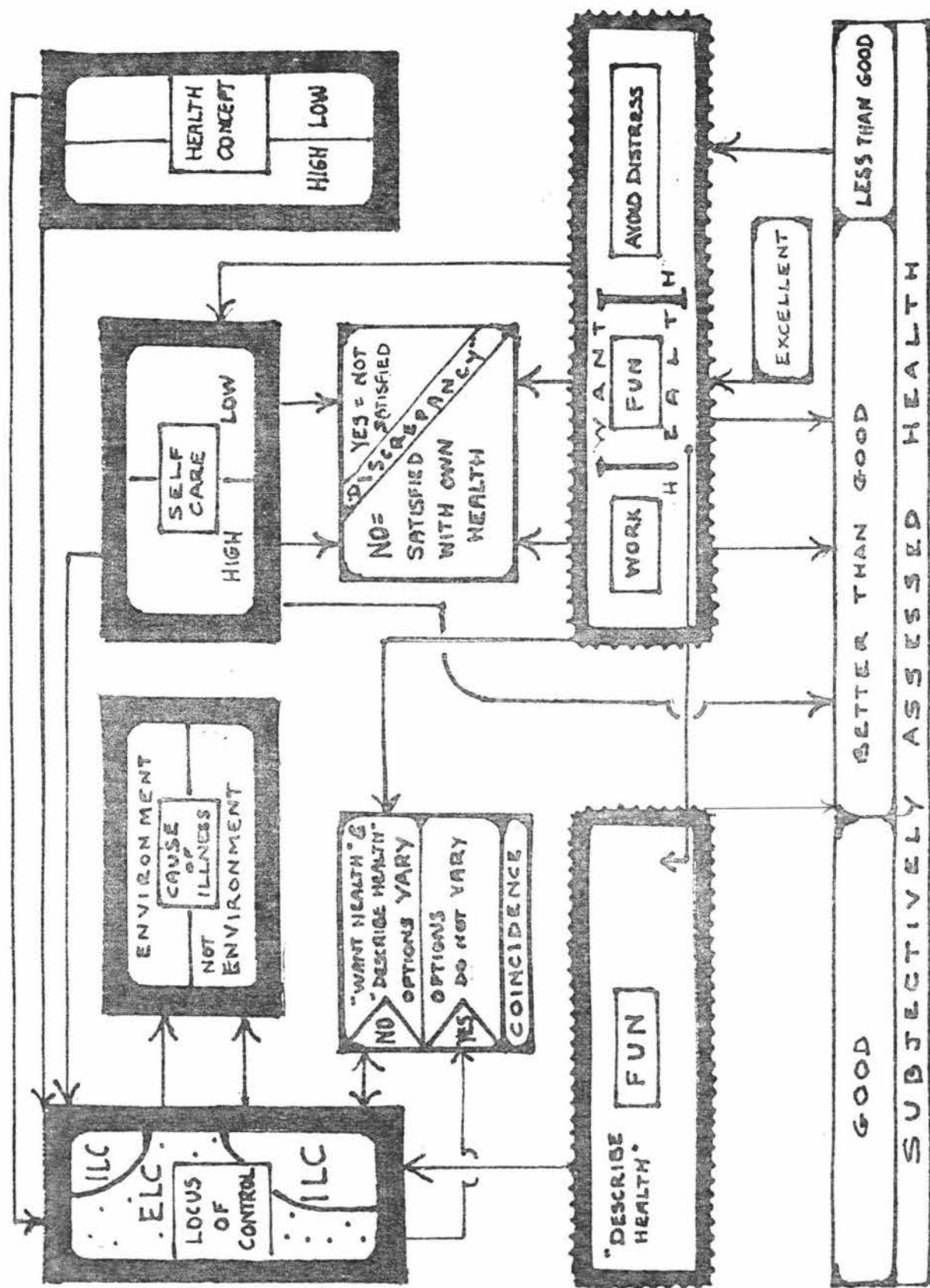
2. Profile derived from Core variables.

In addition to the results presented above it was found that two particular variables emerged as 'organizing' variables around which a profile could be constructed. These two variables are Describe Health and Want Health. See Figure 5 - 2, p. 127. Although the first two of the results presented below are not claimed to be statistically reliable (Ejs being less than 5) they are included because they are relevant to the present study and are believed to be informative.

(i) Want Health.

Want Health and Own Health. Of the respondents who claimed excellent health one wanted health for the ability to work (option=Work), and five wanted it for the exhilaration it affords (option=Fun). Of those who claimed fair to poor health four chose 'to avoid the distress of being ill' (option=Avoid distress) and two chose each of the other two options. See Table 5 - 18, p. 129.

Those who claim excellent health may be assumed to choose the option Fun for the variable Want Health, and those whose health is fair to poor



FACING PAGE

Figure 5 - 2: Relationships between the "Core" variables, Want Health and Describe Health, and other variables. Relationships between Major variables and other variables also included.

Major variables are indicated by the darker boxing, and Core variables by the serrated boxing.

the option Avoid distress, χ^2 (goodness of fit) = 6.262, df=2, $p < .05$ and 5.909, df=2, $p < .06$ respectively.

When the variable Own Health is considered in terms of three categories, better than good, good, and less than good, it was found that disproportionately more respondents who chose the Want Health options, Work and Fun, reported having better than good health. No such disproportion was evident among those who chose the option Avoid distress. See Table 5 - 19, p. 129.

Persons who choose the Work and Fun options as their assessment of why people want good health are likely to have better than good health themselves, $\chi^2 = 19.899$, and 16.800 respectively, (df=2, $p < .001$).

Want Health and Coincidence. When the variable Coincidence is considered in terms of two categories, non-coincident and coincident, it was found that of the 40 respondents who chose the option Work for the variable Want Health 27 were non-coincident and 13 were coincident. Also eight who chose the option Fun were non-coincident whereas 22 were coincident. See Table 5 - 20, p. 129.

Thus those who say that people want health to be able to work are likely not to choose the same option for describing health, and those who choose the option Fun for why people want health are also likely to choose that option to describe health, $\chi^2 = 4.900$, df=1, $p < .03$ and $\chi^2 = 6.533$, df=1, $p < .02$ respectively.

Want Health and Discrepancy. When the nominal variable Discrepancy is considered in terms of two categories, discrepant and non-discrepant, it was found that of those who chose the option Fun for the variable Want Health 11 were non-discrepant and two were discrepant. Of those who chose the option Work 14 were non-discrepant and five were discrepant, and of those who chose the option Avoid distress six were non-discrepant and four were discrepant. See Table 5 - 21, p. 130.

Thus persons who say that health is wanted for

Table 5-18: Contingency table for Own health and Want health counts.

		O w n h e a l t h			
		Ex- cellent	Very good- good	Fair - poor	
Want Health	WORK chosen by 47.1%	1	37	2	40
	FUN chosen by 35.3%	5	23	2	30
	AVOID DISTRESS chosen by 17.6%	0	11	4	15
		6	71	8	85

Table 5-19: Contingency table for Own health and Want health counts.

		O w n h e a l t h			
		Better than good	Good	Less than good	
Want Health	WORK : Ej=13.3	25	13	2	40
	FUN : Ej=10	20	8	2	30
	AVOID DISTRESS : Ej=5	7	4	4	15

Table 5-20: Contingency table for Coincident and Want health counts.

		Coincident		
		No	Yes	
Want Health	WORK	27	13	40
	FUN	8	22	30

Table 5-21: Contingency table for Discrepancy and Want health counts.

		Discrepancy		
		No	Yes	
Want Health	FUN	11	6.5 2	13
	WORK	14	9.5 5	19
	AVOID DISTRESS	6	5 4	10

Table 5-22: Contingency table for Selfcare scores and Want health (to Avoid Distress) counts.

		Selfcare		
		High	Low	
Want Health	AVOID DISTRESS	2	5.5 9	11

Table 5-23: Contingency table for Locus of control scores and Describe health (Fun) counts.

		Locus of control		
		ILC	ELC	
Describe health	FUN	25	18 11	36

Table 5-23a: Contingency table for Own Health and Describe Health (Fun) counts.

		Own Health		
		Better than good	Good	Less than good
Describe health	FUN Ej=16	33	11	4

the exhilaration and opportunity it affords, or because it allows one to work and look after himself are likely to be satisfied with their own health, $\chi^2 = 6.230$, $df=1$, $p < .02$ and $\chi^2 = 4.263$, $df=1$, $p < .05$ respectively.

Want Health and Selfcare. Of the 11 respondents who chose the option Avoid distress for the variable Want Health nine scored low, and two high, for Selfcare. See Table 5 - 22, p. 130.

Thus those who say that people want health to avoid the distress of being ill are likely to score low on Selfcare, $\chi^2 = 4.455$, $df=1$, $p < .04$.

(ii) Describe Health.

Describe Health and Locus of Control. Of the 36 respondents who described health in terms of the option Fun, 25 scored as internal locus of control and 11 as external. See Table 5 - 23, p. 130.

Thus persons who describe health in terms of the exhilaration and opportunity it affords are likely to be ILC, $\chi^2 = 5.444$, $df=1$, $p < .02$.

Describe Health and Own Health. Of the 48 respondents who described health in terms of the option Fun, 33 claimed a health state that was better than good, 11 claimed good health and 4 less than good health. See Table 5 - 23a, p. 130.

Thus persons who describe health in terms of the exhilaration and opportunity it affords are likely to claim a health state which is better than good, $\chi^2 = 28.625$, $df=2$, $p < .001$.

Results of all the above comparisons are presented as Tables 1 and 2, Appendix H.

3.

Factor Analysis and Construction of MiniQ

As was stated earlier (p. 3) one of the aims of this present study was to produce a refined version of the Health Questionnaire. In order to prepare this refined version (entitled MiniQ, see Appendix I) a principal axes factor analysis followed by varimax rotation was performed on each of the following variables:

Health Concept, which was made up of 13 items,

Locus of Control, made up of 12 items, and

Selfcare, made up of 39 items.

(See Health Questionnaire, Appendix A, questions 7, 13, 14-18 respectively.) The factor analysis data file is presented as Appendix G iii.

Table 5-24: Factor loadings of Health concept items obtained by Varimax rotation, Principal Factor Analysis. (Factor loadings of items used in MiniQ are underlined.)

Items belonging to Health concept variable.	Factor 1	Factor 2
1. Following/leading	.13	.53
2. Pleasurable/painful	<u>.84</u>	.02
3. Passive/active	.49	.44
4. Open/closed	.26	.70
5. Colourful/colourless	.56	.51
6. Good/bad	<u>.73</u>	.07
7. Small/large	.16	<u>.71</u>
8. Beautiful/ugly	.67	.33
9. Cowardly/brave	.16	.70
10. Hot/cold	.01	<u>.52</u>
11. Calm/excitable	.20	.24
12. Boring/interesting	.54	.31
13. Strong/weak	.58	.23
Given Factor name.	Evaluative	Activity-Potency

Health Concept

The abovementioned procedure yielded two health concept factors from the 13 items. See Table 5 - 24, p. 132. These two factors were labelled, on the basis of the content of unambiguous factor loadings, Evaluative and Activity-Potency. The two factors had eigenvalues of 4.9 and 1.9 respectively, and accounted for 52.7% of the variance. Two Evaluative items (good/bad, pleasurable/painful) and two Activity-Potency items (hot/cold, large/small) were retained for the construction of the MiniQ Health Concept variable. Although three items had factor loadings of .70 on Factor 2, hot/cold which loaded .52 was selected because it loaded so close to zero on factor 1.

Locus of Control

The abovementioned factoring procedure yielded four Locus of Control factors which for the present purposes are called Politics, Health, Personal and Social, on the basis of the content of the unambiguous factor loadings. See Table 5 - 25, p. 134. These factors had eigenvalues of 2.5, 1.7, 1.2 and 1.0 respectively, and accounted for 53.8% of the variance. Three items were retained for the construction of the MiniQ Locus of Control variable. They were item 12 (.70 on factor 1), item 11 (.56 on factor 2) and item 10 (.79 on factor 3).

Selfcare

The abovementioned factoring procedure yielded six selfcare factors which for the present purposes are named Playsafe, Agency, Health, Club, Consult and Weight on the basis of the content of the unambiguous factor loadings. These factors had eigenvalues of 4.0, 2.5, 2.3, 2.2, 2.1 and 1.9 respectively and they accounted for 38.1% of the variance. Thirteen items were retained for the construction of the MiniQ selfcare variable. These 13 items were selected on the basis of a factor loading of equal to, or greater than, plus or minus .37. Item 35 was excluded because its wording was so similar to item 36 which was

(text continued on p. 136...

Table 5-25: Factor loadings of Locus of control items obtained by Varimax rotation, Principal Factor Analysis. (Factor loadings of items used in MiniQ are underlined.)

Items belonging to Locus of control variable	Factor 1	Factor 2	Factor 3	Factor 4
1. Getting respect	.14	.11	.55	-.01
2. Effort permits health	.06	.75	.41	-.15
3. Control of politicians	.56	.00	-.03	-.00
4. Overcoming bad luck	.03	.33	-.07	-.02
5. Interpersonal	-.10	.02	.27	.06
6. Overcoming events	.13	.00	.06	-.10
7. Overcoming corruption	.55	.23	.02	-.03
8. Personal recognition	.05	.15	.33	.16
9. Powerful controllers	.65	-.02	.18	.02
10. Interpersonal	.01	-.01	.10	<u>.79</u>
11. Good health is luck	.06	<u>.56</u>	.14	.07
12. Political control	<u>.70</u>	-.01	.13	.00
Given Factor name Politics Health Personal Social				

*

Table 5-26: Factor loadings of Selfcare items obtained by Varimax rotation, Principal Factor Analysis. Factor loadings of items used in MiniQ, underlined. Questionnaire and MiniQ item numbers also shown.

Factor number	1	2	3	4	5	6	
Factor name	Play-safe	Agency	Health	Club	Consult	Weight	
Questionnaire Self-care item number							MiniQ Selfcare item number
2. (Q15)	-.11	-.26	-.17	-.07	-.18	.30	
3. (Q16)	.02	-.15	.04	.31	.02	.12	
4. (Q17b)	.05	-.12	.10	<u>-.47</u>	-.04	.25	1.
8. (Q17f)	<u>.48</u>	.03	.09	-.09	-.09	.00	2.
9. (Q17g)	<u>.61</u>	.00	.21	.07	.04	-.11	3.
10. (Q17h)	<u>.55</u>	.10	.03	.13	-.03	.14	4.
13. (Q17k)	.00	-.05	<u>.37</u>	.06	-.04	-.01	5.
14. (Q17l)	-.00	-.31	-.06	.00	-.13	.23	
16. (Q17n)	.03	-.06	-.03	.05	<u>.64</u>	.10	7.
20. (Q17r)	.11	.06	-.10	.31	.11	-.09	
21. (Q17s)	.07	<u>.43</u>	.01	.23	.11	.06	8.
24. (Q17v)	.11	-.36	-.03	.29	-.10	-.04	
25. (Q17w)	<u>.69</u>	.00	.08	-.04	.04	.07	9.
27. (Q18a)	.21	.21	.34	.15	.08	-.13	
28. (Q18b)	-.06	<u>.49</u>	.07	-.13	-.11	-.09	i
30. (Q18d)	-.01	.10	-.11	-.06	.11	<u>.76</u>	ii
31. (Q18e)	-.06	-.09	.21	<u>.48</u>	-.08	.03	6.
35. (Q18i)	.26	.11	.45	.07	-.07	-.01	
36. (Q18j)	.01	.04	<u>.60</u>	-.11	-.16	.08	iii
38. (Q18l)	-.04	.07	.19	<u>.58</u>	.05	-.03	iv

* Only items having factor loading of .30 or over are cited

included. The items included were the Health Questionnaire Selfcare variable items 4,8,9,10,13,16,21,25,28,30,31,36 and 38. Their factor loadings are shown on Table 5 - 26, p. 135.

The contents of the 13 items selected for the MiniQ selfcare variable are supplied below:

Questionnaire Selfcare variable item number -

4 - club membership	8 - health group membership
9 - altered lifestyle	10- been immunized
13- been to dentist	21- political health activity
25- weight monitoring	28- tooth brushing
30- overeating	31- overuse of alcohol
36- daily walk	38- drinking and driving
16- consulting medically disapproved health practitioner.	

Summary

The MiniQ included four Health Concept items, three Locus of Control items and 13 Selfcare items.

4. MiniQ (refined Questionnaire) results

Relevant data from the 86 questionnaires were transcribed to the MiniQ thus giving N=86 MiniQ results. (For the MiniQ data file see Appendix Giv. This data file includes the Location of Blame scores from the questionnaires, i.e., the scores for the variables Self, Synergic and Environment. However a revised Environment score was used for the MiniQ data file; this was derived from an improved scoring procedure for that variable.³ The Environment score used in the MiniQ data file is a better measure of that variable than the Environment score used in the Questionnaire (interval) data file, Appendix Gii, because unlike the original Environment score it took into account the non self-related data from Question 10. The variable Self had similarly taken into account the self-related data from Question 10. See also Scoring Convention for Self and Environment, Appendix C.)

³. The revised Environment score was, like the Self score, constructed from responses to both Q.10 and Q.12. The

In order to discover if Selfcare scores would be predictable from scores on the other three major variables, (this being one aim of the present study, cf. p. 4), and to augment the model (shown as Figure 5 - 2 on p. 127) to that shown as Figure 6 - 2 on p. 151 , a Pearson Product Moment correlation analysis and a multiple stepwise regression analysis were performed on the MiniQ data for the four major variables.

Results of the Pearson Product Moment correlation analysis are as follows:

Relationships between the variables

Health Concept and Selfcare (N=82), $r = .229$, $p < .025$;

Locus of Control and Selfcare (N=85), $r = .232$, $p < .025$.

Results of the multiple stepwise regression analysis shows that Selfcare can be predicted from Locus of Control:

$F(1,79) = 4.496$, $p < .05$;

Beta weight = .232, $F(1,79) = 4.496$, $p < .05$.

This prediction can be improved by adding Health Concept:

$F(2,78) = 3.915$, $p < .05$;

Beta weights: Locus of Control = .200, $F(2,78) = 3.337$, $p < .05$,

Health Concept = .196, $F(2,78) = 3.208$, $p < .05$;

but not improved by adding (i) Environment

$F(3,77) = 2.811$, $p < .05$;

Beta weights: Locus of Control = .188, $F(3,77) = 2.903$, $p < .05$,

Health Concept = .192, $F(3,77) = 3.072$, $p < .05$,

Environment = -.086, $F(3,77) = .641$, NS;

or (ii) Self

$F(3,75) = 2.608$, $p < .10$;

Note 3, Cont'd.

construction of the Environment score used the following procedure: Subtract Inout score (Q.10) from 100 and to the result add the Environment score of Q. 12.

Table 5-27: Correlation matrix for the four major variables, MiniQ data.⁺

	Health concept	Locus cont'l	Cause (Env't)	Self care	Cause (Self)	Cause (Synerg.)
Health concept						
Locus control	.164					
Cause (Envir ^t)	-.063	-.137				
Self care	.229*	.232*	-.125			
Cause (Self)	.139	.006	-.012	-.028		
Cause (Synerg.)	-.278**	-.095	.097	.034	-.020	
* $p \leq .05$ ** $p \leq .01$ + N varies from 81 to 85						

Beta weights: Locus of Control = .199, $F_{(3,75)} = 3.187, p < .05$.

Health Concept = .204, $F_{(3,75)} = 3.293, p < .05$,

Self = -.057, $F_{(3,75)} = 0.268, NS$.

Pearson Product Moment correlations of these variables are shown above on Table 5 - 27.

C H A P T E R S I X

DISCUSSION

The discussion of the results will be presented in the following order:

Associations between the four major variables used in the hypotheses,

Prediction of Selfcare,

Interpretation of Descriptive findings,

Construction and proposed use of MiniQ.

ASSOCIATIONS BETWEEN THE FOUR MAJOR VARIABLES
USED IN THE HYPOTHESES

Locus of Control and Selfcare

In this present study 40% of the sample emerged as internal locus of control (ILC) whereas only 25% were external, (ELC). The higher proportion of ILC scorers may be a function of the sample type which in this case consisted entirely of employed persons. Because these persons are receiving monetary reimbursement for their work the possibility has to be considered that they will perceive themselves as having control over this particular contingent reinforcement and that this feeling of control may generalize to other areas.

The positive association which obtained between locus of control scores and selfcare scores is consistent with the findings of Langlie (1977), Green et al. (1977) and Strickland (1977) who obtained positive relationships between locus of control scores and measures of health behaviour.

The maximum possible score for each of the 39 selfcare items (as scored for factor analysis, see Appendix B Selfcare) was 2 (see Appendix Giii). An examination of the means of the 39 items which made up the selfcare

variable disclosed that certain items obtained low means. Items having a mean of less than, or equal to .6 and a standard deviation of less than or equal to .9 were deemed low. Items which rated low pertained to obtaining immunization for flu/colds, to involvement in political action concerning health related matters, to membership in a 'service' group and to having a daily walk. For the item 'overconsumption of alcohol' where the scoring was reversed a high mean (i.e., more than, or equal to, .6 with the standard deviation being less than, or equal to, .9) indicated a low rating. This item also rated low indicating that moderation in alcohol intake, together with the other four items already mentioned suggest themselves as targets for health education. One of these four items, 'involvement in political decision making concerning health related matters' drew a response which reflected an attitude orientation rather than an action one. Whereas only 27% of the total sample rated this high by saying they would want to attend a local meeting about a health problem, 60% of high selfcare scorers rated this item as high.

Locus of Control and Health Concept

The finding that Locus of control scores correlated positively with Health Concept scores (Health concept having been measured in terms of potency, activity and evaluation) supports the hypothesized relationship between Health concept and Locus of control scores. This finding is consistent with the research findings which are presented on p. 79f of this present study and which pertain to associations between locus of control and competency, autonomy, wellbeing and health beliefs.

Locus of Control and Location of Blame for illness

Locus of control comprises two dimensions, ILC and ELC, each having its particular 'world view'. Persons who are ILC believe that the locus for causality of reinforcement is internal (or self-related) whereas ELC persons believe it is external (or environmentally related). The hypothesis that the Blame for illness related to

ILC (i.e. to self-related locus of causality for reinforcement) would be self-related and/or non-environmentally related was supported. Persons who believe that locus of causality of reinforcement is external (i.e. non self-related) tend also to believe that the cause of illness is external to them -i.e. is environmentally related. Janis and Rodin's (1979) statement that ILC persons will perceive the cause of illness to be self-related was also supported by the results.

As described earlier (p. 100) the locus of control scale used in the present study was a composite of items used by Rotter (1966) and Kirscht (1972). There is a specific Health locus of control scale (Wallston, Wallston, Kaplan and Maides, 1976b, see Appendix J) which has similarities to the scale used in the present study. This Health locus of control scale was not available to the author at the time when data was collected for this present study. Since the Wallston scale is one which has been validated it would be interesting to replicate the present study using this alternative measure.

Hardy and Conway have observed that locus of control is "an enticing variable for professionals working in an applied area" (Hardy and Conway, 1978; p.222). The finding of this present study, namely that locus of control scores could be predicted from scores on the variables Health concept, Selfcare and Location of blame for illness to the Self, is an important one. Cromwell et al. (1977) suggest that selfcare agency be assessed by locus of control orientation. As ILC can be predicted from the above mentioned variables their suggestion attracts more implications.

Selfcare and Health Concept

The literature relevant to the social selfcare movement indicates that this movement had its roots in a general dissatisfaction with a health care system that was believed to induce dependency and to erode personal autonomy. The pioneers of the social movement of selfcare included groups of women who sought for greater autonomy and for

recognition of personal competence in health matters. As has been mentioned the Health concept variable was measured in terms of activity, potency (and evaluation). It was expected that persons having a propensity for self-care practices would be both health conscious and health assertive, and that this would show up on the health concept measure. The expected direct relationship between the Selfcare and the Health concept variables, both assumed to be characterised by activity and potency, although falling just short of statistical significance, is indicative of the expected trend.

It will be remembered that scores on these two variables, Selfcare and Health concept, did reliably predict scores on Locus of control.

Health Concept and Self-related Blame for illness

It was expected that those who scored highly on Health Concept would be persons who evaluated health positively and in terms of activity and potency. It was predicted, and found to be the case, that such persons would be categorised as ILC. It was also predicted that such persons would attribute the blame for illness to self-related factors. This latter prediction was not supported. However although it did not quite reach the 5% level of significance ($\chi^2 = 3.502$, $df=1$, $p=.07$) a positive relationship between Health concept scores and Synergic scores (i.e., blame for illness being attributed to an interaction of self-related and environmental factors) was identified. Thus persons who score highly on Health concept are likely to be ILC and it may be that they do not perceive blame for illness uncausally.

Selfcare and Self-related Blame for illness

Because health behaviours which relate to the care of the self in illness are inextricably linked to the way in which the cause of illness is perceived (Stone, 1979) it was hypothesized that selfcare behaviours (in general) would be associated with the manner in which blame was located for illness. In this present study the scores for self-care (which was a composite variable made up from a

variety of health behaviours) were not found to be associated with scores for self-related blame for illness.

Summary of major variable results

One aim of this research was to provide an instrument which would predict selfcare scores, and indicate readiness for a selfcare approach to health care. It has been mentioned that ILC scorers do not locate the blame for illness in the environment, that the variables Self-related Blame for illness, Health concept, and Selfcare are predictive of the variable Locus of control, and that locating the blame for illness to an interaction of factors is positively associated with Health concept but at a level which just fails to reach significance.

PREDICTION OF SELF CARE

Another aim of this present study was to discover if selfcare could be predicted from the other three major variables. Selfcare could not be so predicted from the Health Questionnaire results but could be predicted on the MiniQ results from Locus of control and Health Concept. Thus the MiniQ is claimed to be a useful tool for predicting selfcare agency.

INTERPRETATION OF DESCRIPTIVE FINDINGS

Who defines health as what?

In the present study variations in conceptions of health were not related to socio-economic factors, which is consistent with the comment of Brearley et al. (1978) who say that "it is quite possible that when data (on lay definitions of health) are collected, explanations for variations in lay conceptions will not be found in simple social class positions" (ibid, p.16). The variations in definition appear to be determined more by the influence of the subjectively experienced health state, and the perceptual set of the definer. As is shown in Figure 6 - 1 (p. 144) the three options for describing health were chosen unevenly across groups. (It is to

SAMPLE

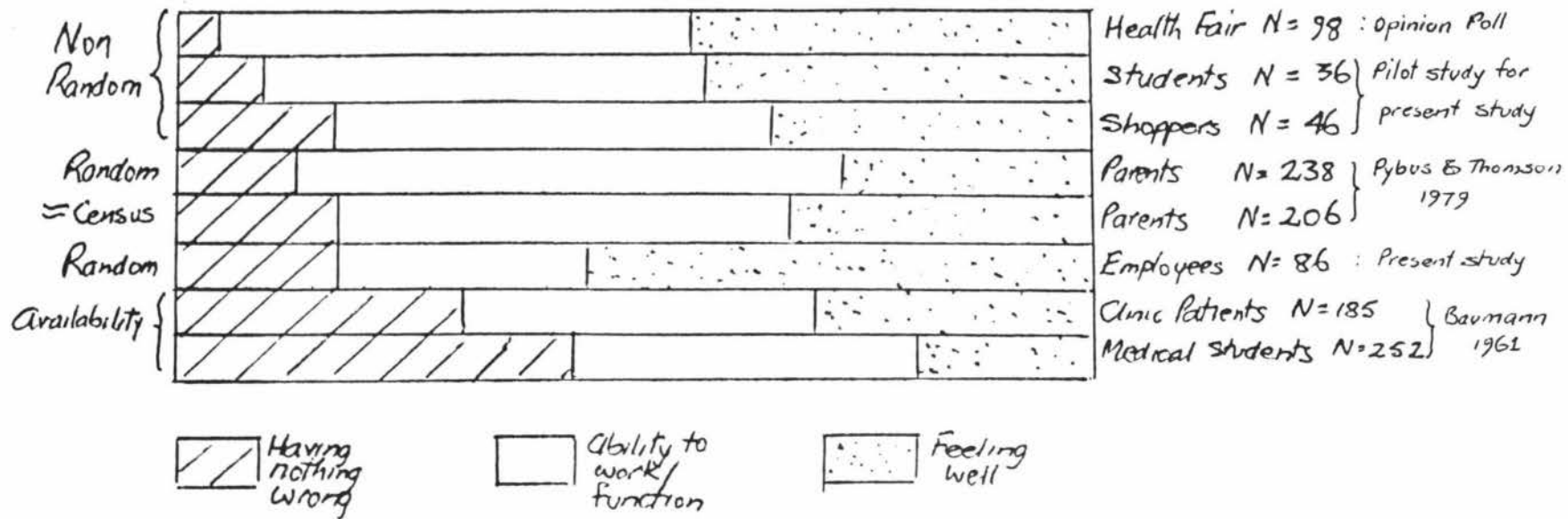


FIGURE 6-1: Percentages of respondents who defined health by reference to each of the three given categories.

be noted that three groups represented on Figure 6 - 1 are not random samples: the results are included however because they illustrate this present discussion.) In the present study 57% of respondents described health in terms of feeling well, 26% in terms of functional ability and only 17% described it as an asymptomatic state. By comparison with the latter result of 17%, 31% of patients and 43% of medical students in Baumann's (1961) study described health as being asymptomatic. Patients and medical students are assumed therefore to have a perceptual set which is symptom-oriented.

That employed persons chose the category of feeling well the most often of all randomly sampled groups is an important finding. It is suggested that respondents will not choose functional ability (option, Work) for describing health if they are already employed. This finding supports the proposal of a hierarchy of healths (for which see Chapter 2, p. 45f). This hierarchy proposes that those who are sick will describe health in terms of being asymptomatic, and that those who are either working or are not functionally impaired will describe it in terms of feeling well (option, Fun). Wilson was perceptive when he asked, "For what are we healthy? Just for the fun of it!" (Wilson, 1975; p. 119).

Who has what sort of health?

The present study found a positive relationship between a health state subjectively perceived as better than good and high scores on Selfcare, as did Langlie (1977). There was also a statistically significant relationship between upper socio-economic status and internality on locus of control, which in the light of the earlier discussion could suggest that the person who belongs in the socio-economic groups 2 and 3 (Elley and Irving, 1976 and Irving and Elley, 1977) - i.e., the upper of the two divisions in the terms of this present study - could be expected to be better disposed to selfcare behaviours than the person in the lower socio-economic division.

The data showed also that persons who are married report

having better health than persons who are not and that those of higher socio-economic status report better health than those of lower socio-economic status. These findings are consistent with the survey results described on p.105 of this present study.

Behaviours of the person who wants better health

Hood and Farmer (1974) suggested the likelihood that relationships would occur between being a consumer of the health care system and being dissatisfied with personal health, and between a person's selfcare practice and his satisfaction or dissatisfaction with his own health. In the present study there was no relationship in either case.

Effects of the value placed on health upon other perceptions and behaviours

Use of Rotter's (1966) I - E locus of control scale has produced findings which show a positive relationship between ILC and health behaviour (Langlie, 1977; Strickland, 1977). Where ILC and health behaviour have not been found to be associated the failure has been attributed to the use of the generalised I - E scale in a situation where the investigators have failed to treat, as a separate variable, the value placed on health. Green et al. (1977) point out that the Wallston et al. (1976b) Health locus of control scale has predictive validity for health behaviour (which is a part of selfcare) and that the prediction of selfcare from ILC can be expected to increase when health is valued highly relative to other values. They go on to say that it will not be sufficient for selfcare programs to increase internality of control (in clients) unless (the clients) already place a high value on the health goal or practice advocated. But if (the clients) value the health goal or practice their internal control of reinforcement becomes a crucial factor in their selfcare practice. Measurement of (health) locus of control and the value placed on health is therefore as important as measuring health knowledge.

Green et al. 1977, p.171.

Green et al. are speaking here of health locus of control as measured by Wallston et al.'s (1976b) scale but the point they make concerning the value placed on health (i.e., the salience of health) is important. The Health Questionnaire did not include a question designed to assess the value placed on health, relative to other values, but one question (Q.9) asked, "How desirable is first-rate health for you?" All responses fell within the three positive categories of the 7-point scale. These three categories were: Exceedingly desirable/most desirable/fairly desirable. (The fourth category was 'neither desirable nor undesirable'.)

Regression analyses showed that for none of the major variables (Selfcare, Health concept, Locus of control, Location of Blame for illness) could high scores be predicted from a response (on the health desirability question) of 'exceedingly desirable'. However persons who scored as internal on locus of control were likely to choose 'most desirable', and persons who did not attribute the cause of illness to self-related factors were likely to choose 'extremely desirable' to describe the desirability of first-rate health.

It is suggested that if good health is perceived to be 'very desirable' it is likely that health will be valued highly relative to other values and that this being the case the value on health has contributed to the association which was found between locus of control and selfcare scores.

Respondent profiles

Selfcare

The person in the present study who scores high on selfcare blames illness on to self-related causes and is categorised as ILC. (S)he has better than good health and is satisfied with it, and describes health in terms of exhilaration and opportunity. The person who scores low on selfcare is dissatisfied with his health which he reports as being less than good. He probably will say that people want health in order to avoid the distress of being ill.

Locus of Control

The person who is categorised as ILC is of upper or middle socio-economic status but is not of any particular marital status or age group. (S)he describes health in terms of a feeling of wellbeing (option, Fun) but believes that people want health either to be able to do things (option, Work) or for the exhilaration it affords (option, Fun). The option, Avoid distress, (being asymptomatic) is chosen less frequently by ILC scorers (13.2%) than by the whole sample (17.2%). The ILC person's concept of health is that health is good, active and potent. The implication that clients need to be ILC to be effective selfcare (or health) practitioners appears to be supported. The ILC scorer scores high on selfcare and on health concept and perceives the cause of illness as not being due to environmental factors.

On the other hand the person who scores as ELC scores low on health concept, says people want health to avoid the distress of being ill, and perceives the cause of illness to be due to environmental factors.

Synergic: combinational cause of illness

The person who perceives that illness is due to an interaction of self-related and environmentally-related factors is likely to be aged 34 or under and to perceive that by the exercise of personal responsibility certain semi-preventable illnesses can be avoided. (S)he may also perceive health as being active, potent and good.

Avoid distress: reason for wanting health

The person who chooses 'to avoid distress' as the reason that people want health scores as ELC, and scores low on Health concept and on Selfcare. Although only four persons chose 'to avoid distress' both for describing health and as the reason that people want health it is enlightening to examine these respondents' scores for other variables. It can be seen that all four scored low for Health concept and all scored mid-range (i.e., neither ILC nor ELC) on Locus of control. All scored very low on Self (i.e., they did not blame self-related factors for illness). The highest Z score obtained for the variable Self from these

four respondents was $Z = -1.79$. On Selfcare three scored low and the fourth did not score highly. The relevance of this will be demonstrated below (see Health Grid).

MINIQ: THE REFINED QUESTIONNAIRE

The MiniQ is a refined version of the Health Questionnaire, (see Appendix II). The Questionnaire was designed to furnish results which would give an indication of readiness for selfcare. One advantage of the refined version is that its length is more appropriate for use with unwell persons. The MiniQ consists of the items already mentioned (p. 133-136), the two questions relating to perception of health (i.e., Want Health and Describe Health, questions 5 and 6 in the Health Questionnaire) and the health self-report item (question 8 in the Health Questionnaire). It has already been mentioned that the two health perception questions emerged as core variables (see Figure 5 - 2, p. 127).

For the final version of the MiniQ the original Location of Blame questions, which were demanding of the respondent and which required a complicated scoring procedure, are replaced with a forced-choice item having three options. This is shown below as Table 6 - 1.

Table 6 - 1: Forced choice options for the Location of Blame question, MiniQ.

Not taking care of oneself and/or Part of the body not working properly.	Germs and/or environmental hazards	"Getting" something when one is "run down."
Variable=Self	Variable=Environment	Variable=Synergic
Self-related blame	Environmentally related blame	Interaction of Self- and Environmentally related blame

The 28 item MiniQ is presented as an assessment instrument. Responses are scored using the scoring code shown in Appendix Iii and the results are entered on the form shown as Figure 6 - 2 by marking the appropriate boxes.

Criteria for high and low categories, Major variables

Table 6 - 2 sets out the cut-off points which define high and low categories for the three MiniQ variables, Health concept, Locus of control and Selfcare. The criterion used to establish such a cut-off point is a Z score of greater than, or equal to .5 and -.5 for the high and low categories respectively.

Table 6 - 2: Sample size, means and standard deviations, and score range for high and low categories for the three MiniQ major variables.

Variable	N	Mean	SD	Range*	
				High	Low
Health concept	82	17.9	5.3	≥ 21	≤ 15
Locus of control	85	7.6	2.3	≥ 9	≤ 6
Selfcare	86	7.8	1.8	≥ 9	≤ 7

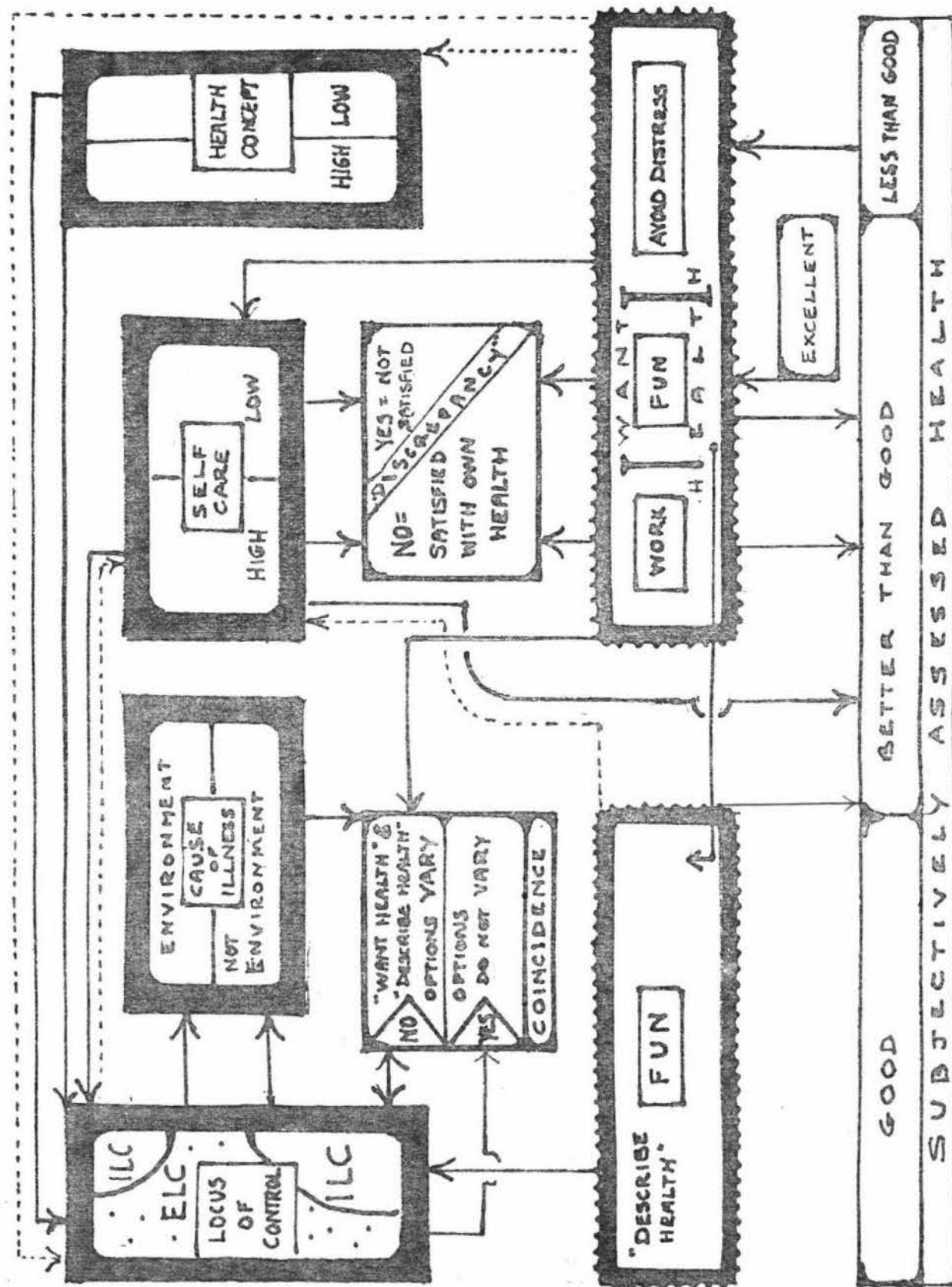
* ≥ : greater than, or equal to

≤ : less than, or equal to

MiniQ Scoring Guide

The results of the MiniQ data analysis are consistent with the results of the Questionnaire presented as Figures 5 - 1 and 5 - 2, pages 114 and 127. Figure 5 - 2 can be augmented from the MiniQ results. The additions, for which see Figure 6 - 2, p.151, dotted lines, are as follows:

- (i) High selfcare scores can be predicted from ILC therefore the arrow from ILC to high selfcare has been added.
- (ii) The continuous variables Selfcare and Locus of control are positively correlated, therefore it is assumed that the person who chooses 'avoid distress'



FACING PAGE

SCORING GUIDE FOR MINIQ

Figure 6 -2 : Relationships between Core variables and other variables, between Major variables and other variables:
Augmented from MiniQ data analysis.
Major variables indicated by the darker boxing and Core variables by the serrated boxing.

for Want Health and thus is likely to score low on selfcare will also be likely to score low (i.e., ELC) on locus of control. The arrow from 'avoid distress' to ELC indicates this addition.

- (iii) Because the continuous variables Selfcare and Locus of control are positively correlated it is also assumed that the person who chooses 'Fun' for Describe Health and is thus likely to be ILC will also be likely to score high on selfcare. The arrow from Describe Health (Fun) to high selfcare indicates this addition.
- (iv) The continuous variable Health concept can be predicted from the continuous variable Selfcare, therefore the person who chooses 'avoid distress' for Want Health and thus is likely to score low on selfcare may be assumed to score low on Health concept also. The arrow from Want Health (avoid distress) to low Health Concept indicates this addition.

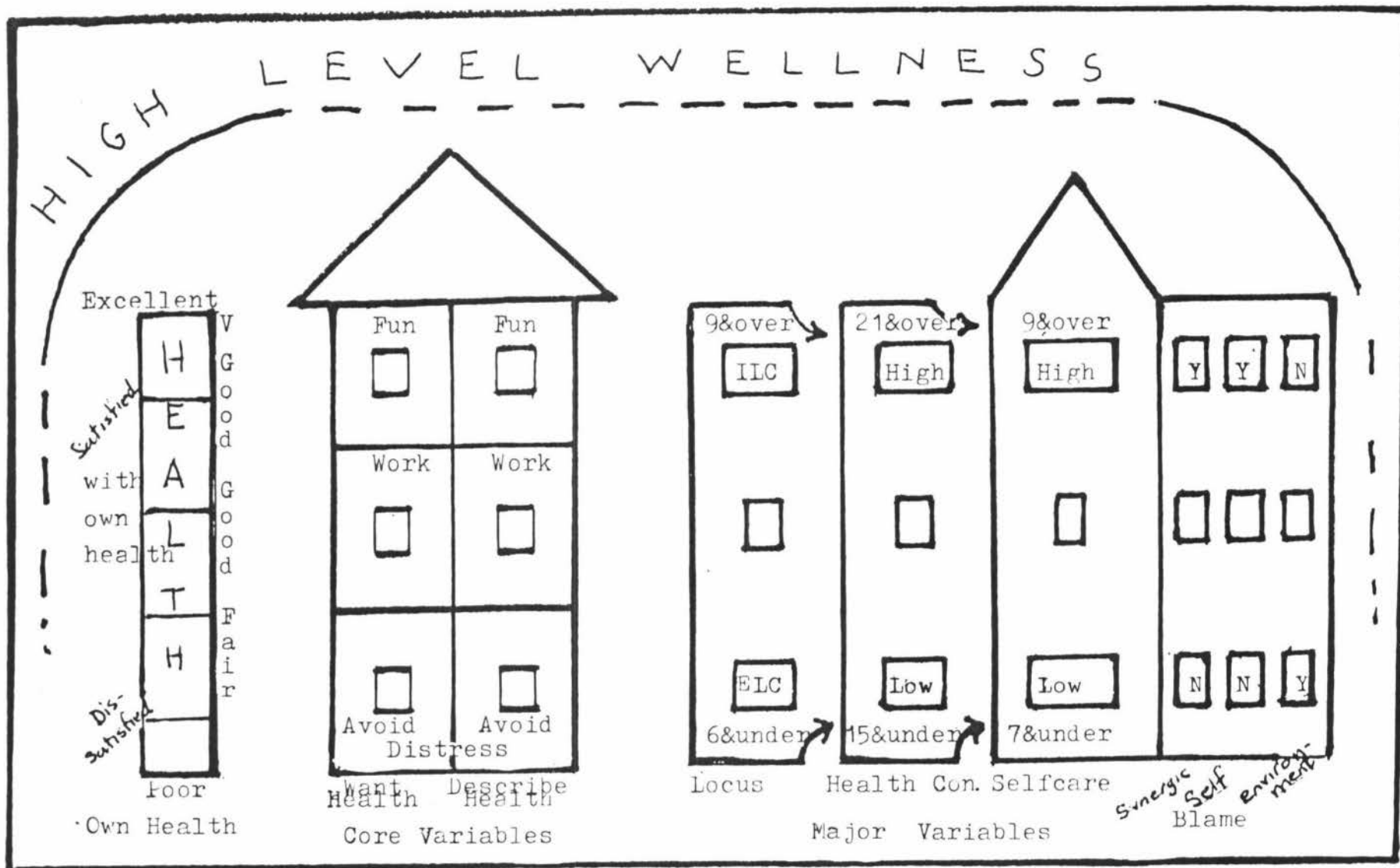
The Discrepancy variable (i.e., being satisfied/dissatisfied with one's own health) is not included as a question in the MiniQ but is retained in the form for its predictive interest.

Reference to Figure 6 - 2, p. 151, shows that

- (i) the person who chooses 'avoid distress' for Want Health is likely to score low on Health concept, Selfcare, and Locus of control (i.e., be ELC), and may be someone with poor health;
- (ii) the person who chooses 'work' for Want Health has better than good health and is satisfied with it. Because (s)he chooses a different option than 'work' for describing health (s)he will probably choose 'fun'. Fifty-one percent of those who chose 'work' for Want Health chose 'fun' to describe health, but only 18% chose 'avoid distress';
- (iii) the person who chooses 'fun' for Want Health has better than good health, and may have excellent health. (S)he is satisfied with this health status and is likely to choose 'fun' to describe health. The person who chooses 'fun' to describe health is likely to be ILC and to score high on Selfcare. (S)he will probably not perceive the cause of illness as environmentally related.

Figure 6 - 3: THE HEALTH GRID

Relationships between Core variables,
Major variables, health state.



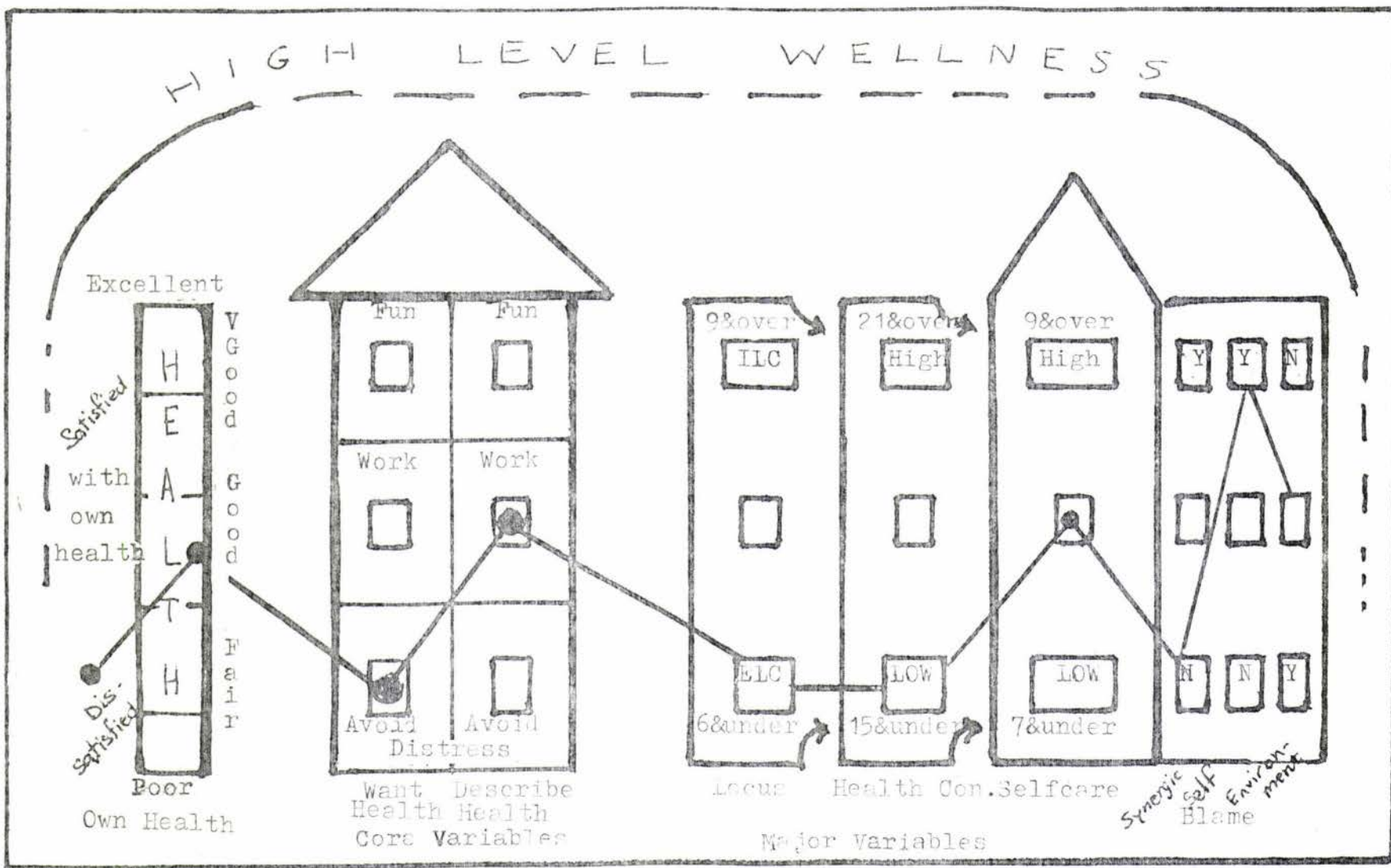
The Health Grid

Having established these associations it is now possible also to conceptualize a 'Health Grid'. This Health Grid, for which see Figure 6 - 3, p.153, portrays all that is shown on Figure 6 - 2 (p. 151) in a way that better demonstrates the relevance and usefulness of the model.

A Scoring guide filled in from data from a randomly selected questionnaire (code number 87) is presented as Figure 6 - 4 (p. 155) in order to illustrate the interpretation of a completed scoring guide. In this particular case the respondent chose 'to avoid distress' as the reason that people want health. As predicted he scored as ELC on Locus of control, and low on Health concept. His Selfcare score was slightly higher than predicted but not high enough to be classified in the high category. This respondent rated his health as good but was not satisfied with it. Although the respondent chose as the reason people want health the option 'avoid distress' he chose 'ability to work' in describing health. Thus the Want Health/Describe Health options varied - the respondent was non-coincident. His Location of Blame for illness result is entered for interest. It was not Environment as predicted but neither was it the reverse. He scored 'No' for Synergic. These results, set out on Figure 6 - 4, are reproduced as a profile on the Health Grid shown as Figure 6 - 5, p. 156.

The Health Grid illustrates the concept of a hierarchy of of healths (cf. p. 45). The options chosen for the variables Want Health and Describe Health are associated with predicted results both for the variable Own Health and for the four major variables. Thus a person who is ill or whose health is poor may be expected to choose the 'avoid distress' option as the reason that people want health, and to describe health similarly. A person who is convalescing may be expected to choose 'ability to work' as the reason that people want health, and to describe health similarly, and a person who is employed and/or has no functional limitation may be expected to choose the 'fun' option for both the Want Health and the Describe Health variables. The Health Grid also illustrates the concept of 'readiness' for a selfcare approach to personal health care.

Figure 6 - 5: Profile of results from
Questionnaire code number 87.



USE OF THE MINIQ AND HEALTH GRID IN NURSING PRACTICE

Quizzes ostensibly designed to allow respondents to know more about themselves appear in magazines with a frequency that attests to their popularity. Thus the MiniQ, a short quiz offered for use by nurses with clients, is expected to arouse the client's interest.

Results derived from the MiniQ furnish a descriptive profile of the client's perception of health, locus of control, selfcare propensity and location of blame for illness. The results also give a predictive tool for assessing client readiness to benefit from a selfcare nursing approach, and a measurement tool by which profile changes can be demonstrated over time.

The nurse scores the MiniQ which the client has completed and fills in the profile derived from the results on the Health Grid. The presentation of the result to the client provides an opportunity to discuss the ways in which both health and location of blame for illness can be perceived. A simple statement to the client that the trend illustrated by the profile gives the nurse an indication of the ways in which she can best be of assistance to the client is all that will be required. The nurse however will focus on the results shown for selfcare and for locus of control on the Health Grid. If both are high the client will have Minimal Difficulty (Redman, 1978) in collaborating in a selfcare nursing approach. If both these variables are scored low the client may have Intermediate Difficulty with, or Delayed Readiness for, the selfcare mode of health care.

Readiness for a selfcare approach to health care

Redman (1978) in discussing patient education says that giving health information is insufficient on its own: patient education occurs when the client is helped to put the information to use - i.e., to enact it. However patient education programs have failed to differentiate the various categories of difficulty experienced by the client. An estimation of amenability to educational

therapy for selfcare can be made on the basis of the class of difficulty presented by the client. Redman says that the categories range from Profound Difficulty (where the client is judged not to be amenable to educational therapy) through Maximal, Intermediate, and Minimal Difficulty to Delayed Readiness (where the client's motivation is inadequate for the task of learning). "In categorizing classes of difficulty the implication is that patients falling in different categories need different instructional tracks in terms of time, kinds of teaching materials and assistance with motivation" (Redman, 1978; p.1365).

Motivation for a selfcare approach to health

Another sort of differentiation can be assessed from the Health Grid profile. Becker, Drachman and Kirscht (1974) and Becker and Green (1975) describe the concept of health motivation as having four components, three of which are the perception of physical threat, the perception of personal control over health matters, and a general health concern. Scores on the variables Environment, Locus of Control and Health Concept can be expected to reflect to some extent a client's motivation to engage in selfcare for health. Hardy and Conway (1978) also believe that perception of control will emerge as one of several indicators of health-related behaviour and therefore will reflect motivation. Motivation to seek health-related information has been demonstrated to be a joint function of a person's locus of control beliefs and the value that is placed on health (Wallston et al., 1976).

Client motivation for selfcare will also be associated with the value which is placed on health, relative to other values. When a high value is placed on the health goal sought any program aimed to increase internality of locus of control and selfcare agency can be expected to be effective.

The contribution of nursing care to advancement
of client selfcare on the basis of orientation
on Locus of Control

The client who is internal on locus of control is more likely than his external counterpart to better his own health. The relationship between internality and self-care agency is an interactive one. If internality on locus of control is increased the client will be more likely to augment his selfcare repertoire, and when a selfcare repertoire is enlarged the client will be likely to increase on internality because of his greater competence and autonomy. Internality can be fostered either by using the counselling technique of Reimanis and Shaefer (1970) - cf. p.69 of this present study - or by reinforcing those independent selfcare behaviours which are already being undertaken. In addition to the verbal identification of those behaviours which the client is currently exercising will contribute to the client's recognition of personal agency in selfcare.

On the basis of the study done by Best and Steffy (1975)- referred to earlier in this present study on p. 69 - it is suggested that the nurse be guided by the client's locus of control orientation when she attempts to foster selfcare competency. A client who is external may respond better to situational cues and reinforcers whereas the internal client may be best served by the provision of appropriate information. The internal person differs from the external person not only in the extent to which he will seek and use information (DuCette and Wolk, 1973) but also in his cognitive activity (Seeman, 1963). The external person is more likely to comply with the influence attempts of the nurse especially if the source of that influence is perceived to be a person of high status (Biondo and MacDonald, 1971). Seeman (1971) points out that people who feel powerless (i.e., externals) do not believe that knowledge which is relevant to the exercise of control can be put to any use.

Dua (1970) found that a behaviourally oriented action program was more effective than a conversational re-

education one for increasing internality. The implication of this for nursing is that at every opportunity client-actioned selfcare behaviours be taught and reinforced as they recur. Once the cycle of increased internality → greater selfcare agency → increased sense of competency → increased internality is set in motion an improvement in health, leading to an experience in wellbeing, may be expected. This in turn should act as a health reinforcer to selfcare practice thus providing the condition for self-perpetuating selfcare to be harnessed (as discussed earlier, p.77f) in the pursuit of high level wellness.

A nurse who is guided by the client's orientation on locus of control in her attempts to foster selfcare autonomy will be doing what Redman (1978) enjoins. In responding to client variables she will use different instructional tracks, different kinds of teaching material, and different levels of assistance with motivation for internal and external locus of control clients. By using the MiniQ and the profile derived from it, it is expected that the nurse will be able to assess client readiness for a selfcare nursing approach and to tailor her selfcare nursing intervention to the control orientation of the client. If the MiniQ is administered prior to the client's discharge it is expected that a change toward a higher profile will be evident. This change can not be expected to be very great for the variable Selfcare because there are only five of the 13 items which would unquestionably allow a changed response. In particular it is expected that results for the variables Want Health and Describe Health will have moved up on the profile. The concept of a hierarchy of healths (see p. 45f of this present study) would thus receive support, given that the client's health just prior to discharge had improved from his health status at the commencement of treatment.

S U M M A R Y A N D C O N C L U S I O N

This thesis has considered selfcare as a model for health care, health as the goal of selfcare, and the citizen as a selfcaring health practitioner. Evidence has been advanced to support the claim that a person's readiness to engage in personally initiated selfcare, or to collaborate in professionally assisted selfcare, will be a function of the relationships between the four major variables, Locus of Control, Health Concept, Selfcare and Location of Blame for illness. It is further claimed that the MiniQ Health Questionnaire and associated Health Grid used in this study illustrate the hierarchy of healths and have descriptive, predictive and measurement capabilities. The tool is offered for use in clinical practice.

The recommended MiniQ Package would include, in addition to the MiniQ itself (see Appendix Ii), a copy of the MiniQ Scoring Code (see Appendix Iii), a set of instructions for the administration of the MiniQ, a copy of the Scoring Guide (Figure 6 - 2, p. 151) accompanied by the criteria for high and low categories (from Table 6 - 2, p. 150), and a copy of the Health Grid (Figure 6 - 3, p. 153) on which the profile derived from the scores is to be entered. The MiniQ Package would also include guidelines to the nurse for the interpretation of the results and for the tailoring of selfcare guidance to the individual client's requirements.

B I B L I O G R A P H Y

- Abrams, H. A Community Perspective on Health Care. Nursing Outlook, Feb. 1971, 19, (2), 92-94.
- Allport, G. Pattern and Growth in Personality. New York: Holt, Rinehart and Winston, 1961.
- Anderson, E., and Andrew, A. Senior Citizens' Health Conferences. Nursing Outlook, Sept. 1973, 21, (9), 580-582.
- Antonovsky, A. The Utility of the Breakdown Concept. Social Science and Medicine, Aug. 1973, 7, (8), 605-612.
- Ardell, D. High Level Wellness: an alternative to Doctors, Drugs and Disease. New York: Bantam Books, 1977.
- Asher, B., Fordham, F., and Pitcher, D. A Survey of Behaviour and Opinions. New Zealand: Massey University, 1979.
- Atkinson, J., and Feather, N. (Eds.) A Theory of Achievement Motivation. New York: Wiley, 1966.
- Audy, J. Measurement and Diagnosis of Health. In P. Shepard and D. McKinley (Eds.), Environ/Mental. Boston: Houghton Mifflin, 1971.
- Australian Commonwealth Department of Health. Help Yourself. Adelaide, Australia: Commonwealth Department of Health, 1980.
- Baade, E., Ellertsen, B., Johnsen, T., and Ursin, H. Physiology, Psychology and Performance. In H. Ursin, E. Baade and S. Levine, Psychobiology of Stress: A study of coping man. New York: Academic Press, 1978.
- Balint, M. The Doctor, His Patient and the Illness. London: Pitman, 1964.
- Baumann, B. Perceptions of Health. Journal of Health and Social Behaviour, 1961, 2, 39-46.
- Beaglehole, R. Foreword to Community Attitudes to Sickness and Health. See Reinken et al., 1980.
- Becker, M., Drachman, R., and Kirscht, J. A New Approach to explain Sick Role Behaviour in low income populations. American Journal of Public Health, 1974, 64, 205-216.

- Becker, M. and Green, I. A Family Approach to compliance to Medical Treatment: A selective review of the literature. International Journal of Health Education, 1975, 18, 173
- Beland, I. Clinical Nursing (2nd Edn.). New York: Macmillan, 1975.
- Bellaire, J. Teenagers learn to care about themselves. Nursing Outlook, Dec. 1971, 19, (12), 793.
- Bennett, J. Symposium on the Selfcare Concept of Nursing, (A Foreword). Nursing Clinics of North America, Mar. 1980, 15, (1), 129-130.
- Bergner, L., and Yerby, A. Low income and barriers to use of Health care. New England Journal of Medicine, 1968, 278, (10), 541 - 546.
- Berni, R., and Fordyce, W. Behaviour Modification and the Nursing Process (2nd Edn.). St. Louis: C.V.Mosby, 1977.
- Besson, G. The Health Illness Spectrum. American Journal of Public Health, Nov. 1967, 57, 1901 - 1905.
- Best, J. Tailoring smoking withdrawal procedures to personality and motivational variables. Journal of Consulting and Clinical Psychology, 1975, 43, (1), 1 -8.
- Best, J., and Steffy, R. Smoking modification procedures for internal locus of control clients. Canadian Journal of Behavioural Science, 1975, 7, 155 - 165.
- Biondo, J., and MacDonald, A. (Jnr.) Internal - External Locus of Control and response to influence attempts. Journal of Personality, Sept. 1971, 39, 407 - 419.
- Boorse, C. On the distinction between disease and illness. Philosophy and Public Affairs, Fall 1975, 5, (1), 49-68.
- Boorse, C. Health as a theoretical concept. Philosophy of Science, Dec. 1977, 44, (4), 542 - 573.
- Borkman, T. Experiential Knowledge in Self Help groups as the basis of selective utilization of professional knowledge and services. Paper presented to the Annual Meeting of the Pennsylvania Sociological Society, 1977.

- Brearley, P., Gibbons, J., Miles, A., Topliss, E., and Woods, G. The Social Context of Health Care. London: M. Robertson, 1978.
- Bromley, B. Applying Orem's Selfcare theory in Enterostomal Therapy. American Journal of Nursing, Feb. 1980, 80, (2), 245 - 249.
- Bullough, B. Poverty, Ethnic identity and Preventive Health care. Journal of Health and Social Behaviour, Dec. 1972, 13, 347 - 359.
- Bumbalo, J., and Young, D. The Self Help phenomenon. American Journal of Nursing, Sept. 1973, 73, (9), 1588 - 1591.
- Butterfield, W. Health Education - Changing concepts of health knowledge and selfcare. Royal Society of Health Journal, April 1976, 96, (4), 152 - 155.
- Cameron, J., Chase, E., and O'Neal, S. Homebirth in Salt Lake County, Utah. American Journal of Public Health, July 1979, 69, (7), 716 - 717.
- Carlestad, G. The Individual, the City and Stress. In Society, Stress and Disease. See L. Levi (Ed.), 1971.
- Cartwright, A., and O'Brien, F. Social Class variations in health care and in the nature of general practice consultations. Chap. 10 in Basic Readings in Medical Sociology. See D. Tuckett and K. Kaufert, 1978.
- Cassel, J. An epidemiological perspective of psychosocial factors in disease etiology. American Journal of Public Health, Nov. 1974, 64, (11), 1040 - 1043.
- Cawley, M. Euthanasia: should it be a choice ? American Journal of Nursing, May 1977, 77, (5), 859 - 861.
- Chamberlain, H. and Drui, A. Content of care in rural primary health care practices. Medical Care, 1975, 13, 230 - 240.
- Chen, M. Preface to Health Services Research, Winter 1976, 11, (4), 333 - 334.
- Christensen, D., and Wertheimer, A. Consumer action in Health care. Public Health Reports, Sept. - Oct. 1976, 91, (5), 406 - 411.

- Ciocco, A., Densen, P., and Horvitz, D. On the association between health and social problems in the population. Milbank Memorial Fund Quarterly, 1953, 31, 265 - 290.
- Clemenson, C. Physiological and Psychological reactions in man during exposure to extreme environment. In Society, Stress and Disease. See L. Levi (Ed.), 1971.
- Coburn, D., and Pope, C. Correlates of Preventive health behaviour among a group of Canadian working men. Unpublished paper, 1973, cited in D. Coburn and C. Pope, 1974. (See D. Coburn and C. Pope, 1974.)
- Coburn, D., and Pope, C. Socioeconomic status and preventive health behaviour. Journal of Health and Social Behaviour, June 1974, 15, 67 - 78.
- Cohen, F. Personality, Stress and the development of physical illness. Chap. 4 in Health Psychology, 1979. (See G. Stone et al., 1979.)
- Coley, I. Paediatric Assessment of Selfcare Activities. London: Henry Kimpton, 1978.
- Conant, R., DeLuca, A., and Levin, L. Health Education - A Bridge to the community. American Journal of Public Health, Sept. 1972, 62, (9), 1239 - 1244.
- Corson, S. The lack of feedback in today's societies - a Psychological stressor. In Society, Stress and Disease. (See L. Levi, Ed., 1971.)
- Coser, R. A home away from home. Social Problems, 1956, 4, 3 - 17.
- Coulton, C. Factors related to Preventive Health Behaviour. Social Work in Health Care, Spring 1978, 3, (3), 297 - 310.
- Cousins, N. Anatomy of an illness (as perceived by the patient). New England Journal of Medicine, Dec. 23 1976, 295, 1458 - 1463.
- Cromwell, R., Butterfield, E., Brayfield, F., and Curry, J. Acute Myocardial Infarction: Reaction and Recovery. St. Louis: C.V. Mosby, 1977.
- Danaher, K. Education for Self Care. pp. 69 - 86 in Management of Minor Illness. London: King Edward's Hospital Fund for London, 1979.

- Darby, D. Self help and Self medication in Health Care - A supplement to professional domination. Australian Journal of Social Issues, 1977, 12, (3), 208 - 233.
- Dennison, D. Social Class variables related to health instruction. American Journal of Public Health, June 1972, 62, (6), 814 - 820.
- DiCicco, D., and Apple, D. Health needs and opinions of older adults. Public Health Reports, June 1958, 73, (6), 479 - 487.
- Dilley, J. Teaching Counselors to be self helpers. Counselor Education and Supervision, June 1978, 17, (4), 311 - 314.
- Doust, J. The Right to know. Australian Nurses Journal, Aug. 1977, 7, (2), 47 - 48.
- Dua, P. Comparison of effects of behaviourally oriented action and psychotherapy re-education on introversion - extraversion, emotionality and internal-external control. Journal of Counselling Psychology, 1970, 6, 567- 572.
- Dubos, R. Man Adapting. New Haven: Yale University Press, 1965.
- Dubos, R. Man, Medicine and Environment. New York: Praeger, 1968.
- DuCette, J., and Wolk, S. Cognitive and Motivational correlates of generalized expectancies for control. Journal of Personality and Social Psychology, June 1973, 26, 420 - 426.
- Dunn, H. High Level Wellness for Man and Society. American Journal of Public Health, June 1959, 49, (6), 786 - 792.
- Dunn, H. What High level wellness means. Canadian Journal of Public Health, Nov.1959, 50, 447 - 457.
- Dunnell, K., and Cartwright, A. Medicine Takers, Prescribers and Hoarders. London: Routledge, 1972.

- Echeveste, D., and Schlacter, J. Marketing: A strategic framework for Health Care. Nursing Outlook, June 1974, 22, (6), 377 - 381.
- Eckholm, E. The Picture of Health: Environmental sources of Disease. New York: Norton, 1977.
- Eggebroten, E. Why not the Laundromat ? Nursing Outlook, Dec. 1973, 21, (12), 758 - 782.
- Egger, G., and Cullen, J. Self Care: alternative to soaring health costs. New Doctor: Journal of the Doctors' Reform Society, Aug. 1978, 9, 33 - 35.
- Elley, W., and Irving, J. Revised Socio-economic Index for New Zealand. New Zealand Educational Journal, 1976, 11, (1), 25 - 36.
- Englefield, R., and class. Health Education: Where are you? New Zealand Nursing Journal, Feb. 1980, 73, (2), 26.
- Ennes, H. A Crisis of conscience in Health care. American Journal of Public Health, Oct. 1968, 58, (10), 1812.
- Erdos, P. Professional Mail Surveys. New York: McGraw Hill, 1970.
- Erikson, E. Identity and the Life Cycle. Psychological Issues, 1, (Whole Issue), 1959.
- Evans-Pritchard, E. The Nuer. Oxford: Clarendon Press, 1940.
- Facteau, L. Self Care Concepts and the care of the hospitalised child. Nursing Clinics of North America, Mar. 1980, 15, (1), 145 - 156.
- Fanshel, S., and Bush, J. A Health Status index and it's application to Health Services Outcomes. Operations Research, Sept. - Oct. 1970, 18, 1021-1066.
- Fisher, G., and Strantz, I. An ecosystems approach to the study of dangerous drug use and abuse with special reference to the marijuana issue. In Health and the Social Environment. (See P. Insel and R. Moos, 1974.)
- Fisher, R., and Yates, F. Statistical Tables for Biological, Agricultural and Medical Research. London: Oliver Boyd, 1938.

- Fonaroff, A. Preface to Health Education Monograph, Summer 1977, 5, (2), 108 - 114.
- Francis, T. (Jnr.) Research in Preventive Medicine. Journal of the American Medical Association, Mar. 5 1960, 172, 994.
- Frاندemont, J., and Sclafani, M. Self medication: Program for the emotionally ill. Journal of Psychiatric Nursing and Mental Health Services, Jan. 1978, 16, (1), 15 - 17.
- Frankl, V. The significance of meaning for Health. Chap. 12 in D. Belgum (Ed.), Religion and Medicine: Essays on meanings, values and health. Iowa: Iowa State University, 1967.
- Frederick, H., and Northam, E. A Textbook of Nursing Practice, (2nd Edn). New York: Macmillan, 1938.
- Freeman, V. Beyond the Germ theory: Human aspects of health and illness. Journal of Health and Social Behaviour, Jan. 1960, 1, 8 - 13.
- Freidson, E. The Organization of Medical Practice and Patient Behaviour. American Journal of Public Health, 1961, 51, 43 - 52.
- Freidson, E. Professional Dominance: The Social Structure of Medical Care. New York: Atherton, 1970.
- Fry, J. Self Care: Its place in the total Health Care System. Report by an independent working party, Sept. 1973. (Cited by Levin et al., 1976, p. 210.)
- Fuchs, V. Who Shall Live. New York: Basic Books, 1975.
- Gair, G. Lifestyle diseases are killing us. Report in Manawatu Evening Standard, (Palmerston North, New Zealand), June 21, 1980, 28.
- Gartner, A., and Riessman, F. Self Help models and Consumer Intensive health practice. American Journal of Public Health, Aug. 1976, 66, (8), 783-786.
- Gelfand, H. On measuring Health or Illness. Letter in American Journal of Public Health, Jan. 1976, 66, (1), 95.

- Gerard, H., and Rabbie, J. Fear and Social comparison.
Abnormal and Social Psychology, 1961, 62, 586 - 592.
- Gertman, P. Physicians as guiders of Health care use.
In Consumer Incentives for Health Care. (See S. Mushkin,
Ed., 1974.)
- Giglio, R., Spears, B., Rumpf, D., and Eddy, N. Encouraging
behaviour changes by use of client held records.
Medical Care, Sept. 1978, 16, (9), 757 - 764.
- Girdano, D., and Everly, G. Controlling Stress and Tension.
New Jersey: Prentice Hall, 1979.
- Glogow, E. The 'bad patient' gets better quicker.
Social Policy, Nov. - Dec. 1973, 4, 72 - 76.
- Gochman, D. Some steps towards a Psychological Matrix for
Health Behaviour. Canadian Journal of Behavioural
Science, Jan. 1971 (a), 3, 88 - 101.
- Gochman, D. Some correlates of Children's health beliefs
and notential Health Behaviour. Journal of Health and
Social Behaviour, June 1971 (b), 12, 148 - 154.
- Goldsmith, S. Political party health planks: A Mechanism for
participation or prediction ? American Journal of
Public Health, July, 1973, 63, (7), 594 - 601.
- Goodwin, J. Programmed instruction for selfcare following
pulmonary surgery. International Journal of Nursing
Studies, 1979, 16, (2), 9 - 40.
- Gore, P., and Rotter, J. A Personality Correlate of Social
Action. Journal of Personality, 1963, 31, 58 - 64.
- Gorsuch, R. Factor Analysis. Philadelphia: W.B.Saunders,
1974.
- Graham, S. The Sociological Approach to Epidemiology.
American Journal of Public Health, Nov. 1974, 64,
(11), 1046 - 1049.
- Green, I. Status Identity and Preventive health behaviour.
Pacific Health Education Reports, No. 1. Berkeley:
University of California, and Honolulu: University of
Hawaii, 1971.

- Green, L., Werlin, S., Schauffler, H., and Avery, C.
Research and demonstration issues in self care: Measuring the decline of medicocentrism. Health Education Monographs, Summer 1977, 5, (2), 161 - 189.
- Grier, M. Decision making about Patient care. Nursing Research, Mar. - April 1976, 25, (2), 105 - 110.
- Griffith University Health Services Research Team.
Self Help health care research program. Queensland, Australia: Griffith University, 1979.
- Groen, J. Social Change and Psychosocial disease. In Society, Stress and Disease. (See L. Levi, Ed., 1971.)
- Grossman, M. The Demand for Health. New York: Columbia University Press, 1972.
- Grossman, M., and Rand, E. Consumer Incentives for Health Services in Chronic illness. In Consumer Incentives for Health Care. (See S. Mushkin, Ed., 1974.)
- Gruenberg, E. The Failure of Success. Milbank Memorial Fund Quarterly, 1977, 55, (1), 3 - 22.
- Hadley, B. Review of current concepts of health and illness. Unpublished manuscript 1964, cited by Wu 1973, p.87.
- Haefner, D. Preventive actions in dental disease, tuberculosis and cancer. Public Health Reports, 1967, 82, 451 - 460.
- Hamburg, D. Crowding, Stranger contact and Aggressive Behaviour. In Society, Stress and Disease. (See L. Levi Ed., 1971.)
- Hardy, M. and Conway, M. Role Theory: Perspectives for Health Professionals. New York: Appleton-Century-Crofts, 1978.
- Harmer, B. Textbook of the Principles and Practice of Nursing. New York: Macmillan, 1922.
- Harmer, B. (Revised by V. Henderson) Textbook of the Principles and Practice of Nursing (5th Edn.). New York: Macmillan, 1955.

- Harrelson, E., and Donovan, K. Consumer responsibility in a prepaid group health plan. American Journal of Public Health, Oct. 1975, 65, (10), 1077 - 1086.
- Harty, M. Partnership for Health: A small beginning. Nursing Outlook, May 1973, 21, (5), 339 - 342.
- Hattinga Verschure, J. (Ed.) Changes in Caring for Health. Aylesbury: H M and M, 1980.
- Havinghurst, R. Successful aging. In R. Williams (Ed.), Processes of Aging Vol. 1. New York: Atherton, 1963.
- Hecht, A. Self Medication, Inaccuracy and what can be done. Nursing Outlook, April 1970, 18, (4), 30 - 31.
- Hefford, J. Bias only bar to test kits. Report in Manawatu Evening Standard (Palmerston North, New Zealand) May 19 1980, p.7.
- Henderson, V. I C N Basic Principles of Nursing Care. London: I C N House, 1960.
- Henry, S. The dangers of self help groups. New Society, 22nd June 1978, 654 - 656.
- Hersch, P., and Scheibe, K. Reliability and validity of Internal-External control as a personality dimension. Journal of Consulting Psychology, 1967, 31, 609 - 613.
- Herzlich, C. Health and Illness. London: Academic Press, 1973.
- Hinkle, L., and Loring, W. (Eds.) The Effect of the man made environment on Health and Behaviour. U.S. : DHEW Centre for Disease Control, 1977.
- Hochbaum, G. Public participation in medical screening programs: A sociopsychological study. Public Health Service Publication No. 572, Washington: U.S. Government Printing Office, 1958.
- Hochbaum, G. Consumer participation in Health planning: Toward conceptual clarification. American Journal of Public Health, Sept. 1969, 59, (9), 1698 - 1705.
- Hochstim, J. Poverty area under the microscope. American Journal of Public Health, Oct. 1968, 58, (10), 1815 - 1827.

- Hokanson, J. and Burgess, M. The effects of three types of aggression on vascular processes. Journal of Abnormal Social Psychology, 1962, 64, 446 - 449.
- Hood, J., and Farmer, R. A Comparative study of frequent and non-frequent attenders at a general practice. International Journal of Nursing Studies, 1974, 11, (4), 147 - 153.
- Horton, E., Danforth, E., Sims, E., and Salans, L. Endocrine and metabolic alterations in spontaneous and experimental obesity. In G. Bray (Ed.) Obesity in Perspective. Washington, D.C.: U.S. Government Printing Office, 1975.
- Hoyman, H. The Spiritual dimension of man's health in today's world. In D. Belgum (Ed.) Religion and Medicine: Essays on meanings, values and health. Iowa: Iowa State University Press, 1967.
- Hubbard, W. Health Knowledge: The Health of Americans. New Jersey: Prentice Hall, 1970.
- Hunter, S., Swain, B., and Allen, E. A Generalized Expectancy of control and a Health related Expectancy of control: Are they related? Paper presented at the 53rd Annual meeting of the Southwestern Sociological Association, 1978.
- Illich, I. Medical Nemesis. In Basic Readings in Medical Sociology. (See D. Tuckett and J. Kaufert, Eds., 1978. Reproduced from The Lancet, May 11th 1974, (i) 918 - 922.)
- Illich, I. Limits to Medicine. Medical Nemesis: The Expropriation of Health. Great Britain: Penguin, 1976.
- Insel, P., and Moos, R. Health and the Social Environment. London: Lexington, 1974.
- Irving, J., and Elley, W. A Socio-economic Index for the Female Labour Force in New Zealand. New Zealand Journal of Educational Studies, 1977, 12, (2), 154-163.
- Jaccard, J. A Theoretical Analysis of selected factors important to health education strategies. Health Education Monographs, 1975, (3), 192.

- Jackson, E., and Burke, P. Status and symptoms of stress: Additive and interactive effects. American Sociological Review, Aug. 1965, 30, 556 - 564.
- Jahoda, M. Current Concepts of Positive Mental Health. New York: Basic Books, 1956.
- Jamaan, J. Health as a function of ecology. American Journal of Nursing, May 1971, 71, (5), 970 - 973.
- James, W., Woodruff, A., and Werner, W. Effect of internal and external control upon changes in smoking behaviour. Journal of Consulting Psychology, 1965, 29, 184
- Janis, I., and Rodin, J. Attribution, Control and Decision Making: Social Psychology and Health Care. In Health Psychology. (See G. Stone et al., 1979.)
- Jenny, J. Patient advocacy - Another role for Nursing ? International Nursing Review, 1979, 26, (6), 176 - 181.
- Jonas, S. Limitations of community control of health facilities. American Journal of Public Health, June 1978, 68, (6), 541 - 543.
- Jones, W. Influencing individual and public responses. Nursing Mirror and Midwives Journal, April 8th 1976, 64 - 66.
- Jones, W. The use of Mass Media in Health Education. In Management of Minor Illness. London: King Edward's Hospital Fund for London, 1979.
- Joseph, L. Self Care and the Nursing Process. Nursing Clinics of North America, Mar. 1980, 15, (1), 131-143.
- Jus, A. Social Systems and the criteria of Health as defined by the World Health Organization. American Journal of Psychiatry, Feb. 1973, 130, (2), 125-131.
- Kasl, S., and Cobb, S. Health Behaviour, Illness Behaviour and Sick role Behaviour. 1. Health and Illness Behaviour. Archives of Environmental Health, Feb. 1966, 12, 246 - 266.

- Kasl, S., and Cobb, S. Health Behaviour, Illness Behaviour and Sick role Behaviour. 11. Sick Role Behaviour. Archives of Environmental Health, April 1966, 12, 531 - 540.
- Katz, A. Self Help Organizations and Volunteer participation in Social Welfare. Social Work, Jan. 1970, 51 - 60.
- Katz, A., and Bender, E. The Strength in us: Self Help Groups in the Modern World. New York: Franklin Watts, 1976.
- Kaufman, M. High Level Wellness: A pertinent concept for the Health Professions. Mental Hygiene, 1963, 47, 57 - 62.
- Kearney, B., and Fleischer, B. Development of an instrument to measure exercise of selfcare agency. Research in Nursing and Health, 1979, 2, 25 - 34.
- Kegeles, S. Why people seek dental care: A test of a conceptual formulation. Journal of Health and Human Behaviour, 1963, 4, 166 - 173.
- Kessel, N., and Sheperd, M. The health and attitudes of people who seldom consult a doctor. Medical Care, Jan. - Mar. 1965, 3, (1), 6 - 10.
- King, I. Toward a theory for Nursing: General concepts of Human Behaviour. New York: John Wiley and Sons, 1971.
- King, S. Perceptions of illness and Medical Practice. New York: Russell Sage, 1962.
- Kinlein, M. The Self Care Concept. American Journal of Nursing, April 1977, 77, (4), 598 - 601.
- Kirscht, J., Haefner, D., Kegeles, S., and Rosenstock, I. A National Study of Health Beliefs. Journal of Health and Human Behaviour, 1966, 7, 248 - 254.
- Kirscht, J. Perceptions of control and health beliefs. Canadian Journal of Behavioural Science, 1972, 4, 225 - 237.
- Kirscht, J. The Health Belief Model and Illness Behaviour. Health Education Monographs, Winter 1974, 2, (4), 387 - 408.

- Knollmueller, R. A Column of Health. Nursing Outlook, July 1973, 21, (7), 457 - 459.
- Kobrzycki, P. Dying with dignity at home. American Journal of Nursing, Aug. 1975, 75, (8), 1312 - 1313.
- Koos, E. The Health of Regionville: What the people thought and did about it. New York: Columbia University Press, 1954.
- Korn, R. The Private Citizen, The Social Expert, and the Social Problem. In M. Rosenberg (Ed.), Mass Society in Crisis. New York: Macmillan, 1964.
- Kowal, S. Emotions as a cause of cancer: eighteenth and nineteenth century contributions. Psychoanalytic Review, 1955, 42, 217 - 227.
- Kush-Goldberg, C. The health self help group as an alternative source of health care for women. International Journal of Nursing Studies, 1979, 16, 283 - 294.
- Lalonde, M. A New Perspective on the Health of Canadians. Ottawa: National Health and Welfare, 1974.
- Lambert, R., Wertheimer, A., Dobbert, D., and Church, T. The pharmacist's clinical role as seen by other health workers. American Journal of Public Health, Mar. 1977, 67, (3), 252 - 253.
- Lamy, M. Où en est la Médecine ? Paris: Flammarion, 1964.
- Langlie, J. Social Networks, Health beliefs and Preventive health behaviour. Journal of Health and Social Behaviour, 1977, 18, (3), 244 - 260.
- Langlie, J. Interrelationships among Preventive Health Behaviours: A test of competing hypotheses. Public Health Reports, May - June 1979, 94, (3) 216 - 225.
- Lazarus, R. The concepts of Stress and Distress. In Society, Stress and Disease. (See L. Levi, Ed., 1971.)
- Lazes, P. Health Education Project guides outpatients to active selfcare. Hospitals: Journal of the American Hospital Association, Feb. 16th 1977, 51, (4), 81-86.

- LeBow, M. Behaviour Modification: A Significant Method in Nursing Practice. New Jersey: Prentice Hall, 1973.
- Lefcourt, H. Internal versus external control of reinforcement: A Review. Psychological Bulletin, 1966, 65, 206 - 220.
- Leininger, M. An Open System. Nursing Outlook, Mar. 1973, 21, (3), 173 - 175.
- Levi, L.(Ed.) Society, Stress and Disease. London: Oxford University Press, 1971.
- Levin, L. The Layperson as the Primary Health Care Practitioner. Public Health Reports, May-June 1976, 91, (3), 206 - 210.
- Levin, L. Forces and issues in the revival of interest in selfcare: Impetus for redirection in Health. Health Education Monographs, Summer 1977, 5, (2), 115 - 120.
- Levin, L. Patient Education and Selfcare: How do they differ? Nursing Outlook, Mar.1978 (a), 26, (3), 170 - 175.
- Levin, L. Self Care: An emerging component of the Health Care System. Hospital and Health Services Administration, 1978 (b), 23, (1), 17 - 25.
- Levin, L., Katz, A., and Holst, E. Self Care: Lay Initiatives in Health. London: Croom Helm, 1976.
- Lewis, A. Health as a social concept. British Journal of Sociology, June 1953, 4, 109 - 124.
- Lewis, E. Lo, the patient consumer. Nursing Outlook, May 1973, 21, (5), 311.
- Lewis, E. The health care consumer: Compliant captive ? Nursing Outlook, Jan. 1975, 23, (1), 21.
- Lewis, M. Child Initiated Care. American Journal of Nursing, April 1974, 74, (4), 652 - 655.
- Lewis, C., Lewis, M., and Ifekwunigwe, M. Informed consent by children and participation in an influenza vaccine trial. American Journal of Public Health, Nov. 1978, 68, (11), 1079 - 1082.

- Linn, L., and Lawrence, G. Requests made in community pharmacies. American Journal of Public Health, May 1978, 68, (5), 492 - 493.
- Lipsky, M., and Lounds, M. Citizen participation and Health care problems of government induced participation. Journal of Health and Politics, Policy and Law, 1976, 1, (1), 85 - 111.
- Lohrisch, D., Ryan, M., and Rosenbluth, S. Long term effects of a cancer awareness program for community pharmacists. American Journal of Public Health, Dec. 1978, 68, (12), 1217 - 1218.
- Luborsky, L., Todd, T., and Katcher, A. A Self administered Social Assets scale for predicting physical and psychological illness and health. Journal of Psychosomatic Research, 1973, 17, 109 - 120.
- Luckmann, J., and Sorensen, K. Medical Surgical Nursing: A Psychophysiological Approach. Philadelphia: W.B.Saunders, 1974.
- Mabry, J. Lay concepts of etiology. Journal of Chronic Diseases, 1964, 17, 371 - 386.
- MacDonald, A. Internal-external control change technics. Rehabilitation Literature, 1972, 33, 44 - 47.
- Mahler, H. Health - a demystification of medical technology. In Basic Readings in Medical Sociology. (See D. Tuckett and J. Kaufert, Eds. , 1978.)
- Manfredi, C., Cassidy, V., and Moffitt, D. Developing a Teaching Program for Diabetic patients. Journal of Continuing Education in Nursing, 1977, 8, (6), 46 - 62.
- Martin, J. Health Promotion - the importance of demedicalized and active approaches. Letter in the American Journal of Public Health, July 1978, 68, (7), 686 - 687.
- Maslow, A. Motivation and Personality. New York: Harper and Row, 1954.

- Mathers, J. Psychiatry and Religion. In M. Malinsky (Ed.), Religion and Medicine. London: SCM Press, 1970.
- McClelland, D., Atkinson, J., Clark, R., and Lowell, E. The Achievement Motive. New York: Appleton-Century-Crofts, 1953.
- McCorkle, T. Chiropractic: a deviant theory of disease and treatment in contemporary Western culture. Human Organization, 1961, 20, 20 - 23.
- McGrath, J. (Ed.) Social and Psychological factors in Stress. New York: Holt, Rinehart and Winston, 1970.
- McGrory, A. A Well Model Approach to the Care of the Dying Client. New York: McGraw Hill, 1978.
- McKay, D. The Nation's Health - whose responsibility ? In R. Latimer (Ed.) Health Administration in New Zealand. Wellington, New Zealand: New Zealand Institute of Public Administration, 1969.
- McKinlay, J., and Dutton, D. Social-Psychological factors affecting Health care utilization. In Consumer Incentives for Health Care. (See S. Mushkin, Ed. 1974.)
- McLamb, J., and Huntley, R. The hazards of hospitalization. Medical Journal, 1967, 60, 467 - 472.
- Mechanic, D. Medical Sociology. New York: Free Press, 1968.
- Mechanic, D. Public expectations and Health care. New York: Wiley Interscience, 1972.
- Merchant, H. Economic pressures to promote selfcare. New England Journal of Medicine, July 8th 1976, 118-119.
- Michael, M., and Sewall, K. Use of the adolescent peer group to increase the selfcare agency of adolescent alcohol abusers. Nursing Clinics of North America, Mar. 1980, 15, (1), 157 - 176.
- Mikulic, M. Reinforcement of independent and dependent patient behaviours by nursing personnel: an exploratory study. Nursing Research, Mar. - April 1971, 20, (2), 162 - 165.

- Milio, N. Dimensions of consumer participation and National Health Legislation. American Journal of Public Health, April 1974, 64, (4), 357 - 363.
- Milio, N. A Broad perspective on Health: A teaching learning tool. Nursing Outlook, Mar. 1976 (a), 24, (3), 160 - 163.
- Milio, N. A Framework for Prevention: Changing health-damaging to health-generating life patterns. American Journal of Public Health, May 1976 (b), 66, (5), 435 - 439.
- Milio, N. Self care in urban settings. Health Education Monographs, Summer 1977, 5, (2), 136 - 144.
- Minkler, M. Health attitudes and beliefs of the urban elderly. Public Health Reports, Sept. - Oct. 1978, 93, (5), 426 - 432.
- Moldofsky, H., and Chester, W. Pain and mood patterns in patients with rheumatoid arthritis: a prospective study. Psychosomatic Medicine, 1970, 3, 309 - 318.
- Moos, R. Social ecological perspectives on Health. In Health Psychology. (See G. Stone et al., 1979.)
- Moss, G. Illness, Immunity and Social Interaction. New York: Wiley, 1973.
- Mountin, J. New Health Frontiers: Proceedings of the 15th Annual Conference of the Milbank Memorial Fund held on April 29th and 30th, 1937. New York: Milbank Memorial Fund, 1937.
- Mullin, V. Implementing the Selfcare concept in the acute care setting. Nursing Clinics of North America, Mar. 1980, 15, (1), 177 - 190.
- Mushkin, S. (Ed.) Consumer Incentives for Health Care. New York: Prodist, 1974.
- Myager, V. Psychological stressors and psychosomatic responses. In Society, Stress and Disease. (See L. Levi, Ed., 1971.)

- Natapoff, J. Children's views of health: A developmental study. American Journal of Public Health, Oct. 1978, 68, (10), 995 - 1000.
- Nehring, V., and Geach, B. Patients' evaluation of their care: Why they don't complain. Nursing Outlook, May 1973, 21, (5), 317 - 321.
- Neugarten, B. Personality and the Aging Process. In R. Williams (Ed.), Processes of Aging, Vol. 1. New York: Atherton Press, 1963.
- Nie, H., Hull, C., Jenkins, J., Steinbrenner, K., and Bent, D. Statistical Package for the Social Sciences (2nd Edn.) New York: McGraw Hill, 1970.
- Nightingale, C. The effect on Nursing of the changing role of the Pharmacist. Nursing Forum, 1970, 9, (4), 400 - 407.
- Nightingale, F. Notes on Nursing: what it is and what it is not. London: Harrison, 1859.
- Nikias, M. Social class and the use of dental care under prepayment. Medical Care, 1968, 6, 381 - 393.
- Norris, C. Self Care. American Journal of Nursing, Mar. 1979, 79, (3), 486 - 489.
- Nursing Development Conference Group. Concept Formalization in Nursing: Process and Outcome. Boston: Little, Brown and Co., 1973.
- O.E.C.D. (Organization for Economic Cooperation and Development) Measuring Social Wellbeing: A Progress report on the development of Social Indicators. Paris: O.E.C.D., 1976.
- Oelbaum, C. Hallmarks of Adult Wellness. American Journal of Nursing, Sept. 1974, 74, (9), 1623 - 1625.
- O'Grady, S. Could you live without your GP ? The swing back to selfcare. Cleo, Sept. 1979, 83, 154 - 159.
- Orem, D. Guides for developing curricula for the education of practical nurses. Washington, D.C. : Government Printing Office, 1959.

- Orem, D. Nursing: Concepts of Practice. New York: McGraw Hill, 1971.
- Osgood, C., Suci, G., and Tannenbaum, P. The Measurement of Meaning. Illinois: University of Illinois Press, 1957.
- Otto, H. A Framework for assessing family strengths. In A. Reinhart and M. Quinn Family Centered Community Nursing. St. Louis: C.V. Mosby, 1973.
- Paap, W. Consumer based Boards of Health Centres: Structural problems in achieving effective control. American Journal of Public Health, June 1978, 68, (6), 579-582.
- Palmore, E., and Luikart, C. Health and Social factors related to life satisfaction. Journal of Health and Social Behaviour, Mar. 1972, 13, 68 - 80.
- Parker, B., and Srinivasan, V. A Consumer preference approach to the planning of rural primary Health Care facilities. Operations Research, Sept. - Oct. 1976, 24, (5), 991 - 1025.
- Parsons, T. Definitions of Health and Illness in the light of American values and social structure. In E. Jaco (Ed.) Patients, Physicians and Illness. New York: Free Press, 1958.
- Patrick, D., Bush, J., and Chen, M. Toward an operational definition of health. Journal of Health and Social Behaviour, Mar. 1973, 14, (1), 6 - 23.
- Pearman, W. Consistency in Health seeking behaviour. Paper presented to the Annual Meeting of the Pennsylvania Sociological Society, 1978.
- Pecarchik, R., Ricci, E., and Nelson, B. Potential contribution of consumers to an integrated Health Care system. Public Health Reports, Jan. - Feb. 1976, 91, (1), 72 - 76.
- Perkins, W. Cause and Prevention of Disease. Philadelphia: Lea and Febiger, 1938.
- Phares, E. Locus of control in Personality. New Jersey: General Learning Press, 1976.

- Pires, H. An attributional analysis of Locus of Control orientation and source of informational dependence. Journal of Personality and Social Psychology, 1973, 26, (2), 262 - 272.
- Powles, J. On the limitations of modern medicine. Science, Medicine and Man, 1973, 1, 1 - 30.
- Pratt, L. The relationship of socioeconomic status to health. American Journal of Public Health, Feb. 1971, 61, (2), 281 - 291.
- Pratt, L. The significance of the family in medication. Journal of Comparative Family Studies, Spring 1973, 4, (1), 13 - 35.
- Pratt, L. Family Structure and Effective Health Behaviour: The Energized Family. Boston: Houghton Mifflin, 1976.
- Preston, D. The Health expenditure problem in New Zealand. New Zealand Medical Journal, June 8th 1977, 85, 480 - 483.
- Probststein, I. On self help groups and government agencies. Letter to the American Journal of Public Health, April 1977, 67, (4), 382,
- Pybus, M., and Thomson, M. Health awareness and Health actions of parents. Paper presented to ANZSEARCH/APHA Conference, May 1979.
- Quah, S. Self medication - a neglected dimension of health behaviour. Sociological Symposium, Summer 1977, 19, 20 - 23.
- Rahe, R., Biersner, R., Ryman, D., and Arthur, R. Psychological predictors of illness behaviour and failure in stressful training. Journal of Health and Social Behaviour, Dec. 1972, 3, 393 - 397.
- Redman, B. Curriculum in Patient Education. American Journal of Nursing, Aug. 1978, 78, (8), 1363 - 1366.

- Reimanis, G., and Schaefer, M. Effects of counseling and achievement motivation training on Locus of Reinforcement control. Paper presented at Annual Eastern Psychological Association Convention, Atlantic City, New Jersey, April 1970.
- Reinken, J., DeLacey, A., and Salmond, C. Community attitudes to sickness and health: Stimulus and Response. Vols. 1 - 3. Special Report Series No. 56. Wellington, New Zealand: Government Printer (Hasselberg), 1980.
- Renne, K. Measurement of Social health in a general population survey. Social Science Research, Mar. 1974, 3, (1), 25 - 44.
- Riessman, F. How does self help work ? Social Policy, 1976, 7, 4 - 45.
- Rioch, D. Transition states as stress. In Society, Stress and Disease. (See L. Levi, Ed. 1971.)
- Robinson, D., and Henry, S. Self Help and Health: Mutual Aid for Modern Problems. London: Martin Robertson, 1978.
- Robinson, G., and Owen, J. No one told me to. Nursing Outlook, Mar. 1974, 22, (3), 182 - 183.
- Rockwell, J. Big is not beautiful. New Society, 22nd July 1976, 37, (720), 175 - 177.
- Rodin, J. Obesity: why the losing battle. In Master Lecture Series on Brain Behaviour Relationships. Washington, D.C.: American Psychological Association, 1977.
- Rogers, E. Human Ecology and Health. New York: Macmillan, 1960.
- Rogers, I. Patients' rights: Choices in selfcare. Nursing Forum, 1979, 18, (2), 206 - 211.
- Rogers, M. Educational revolution in Nursing. New York: Macmillan, 1961.
- Rogers, M. An Introduction to the Theoretical Basis of Nursing. Philadelphia: F.A.Davis Co., 1970.
- Roscoe, J. Fundamental Research Statistics for the Behavioural Sciences. New York: Holt, Rinehart and Winston, 1969.

- Rosenfeld, L., and Donabedian, A. Prenatal care in Metropolitan Boston. American Journal of Public Health, 1958, 48, 1115 - 1124.
- Rosenstock, I. A National Study of Health Attitudes. Paper presented to the 92nd Annual Meeting of the American Public Health Association, New York. Oct.5th, 1964.
- Rosenstock, I. Why people use health services. Milbank Memorial Fund Quarterly, July 1966, 44, 94 - 127.
- Rosenstock, I. Prevention of illness and maintenance of health. In J. Kosa, A. Antonovsky and I. Zola (Eds.) Poverty and Health. Cambridge: Harvard University Press, 1969.
- Rosenstock, I. The Health Belief Model and Preventive Health Behaviour. Health Education Monographs, Winter 1974, 2, (4), 354 - 386.
- Ross, J. Social Class and Medical Care. Journal of Health and Human Behaviour, 1962, 3, 35 - 40.
- Rotter, J. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, (80), (1, Whole No. 609).
- Rush, B. Quoted in The Home Health Handbook S. Corans and D. Csgood (Eds.). Vermont: Steven Green Press, 1971.
- Schofield, W. The role of psychology in the delivery of health services. American Psychologist, 1969, 24, 565 - 584.
- Schofield, W. Clinical Psychologists as Health Professionals. In Health Psychology. (See G. Stone et al., 1969.)
- Schweer, S., and Dayani, E. The extended role of professional nursing - Patient Education. International Nursing Review, Nov. - Dec. 1973, 20, (6), 174 - 175.
- Schwirian, P., and Kisker, K. Perceptions of health among Baccalaureate nursing students. Journal of Nursing Education, June 1977, 16, (6), 2 - 9.
- Scott, J. The changing health care environment. American Journal of Public Health, April 1974, 64, (4), 364 - 369.
- Seeman, M. On the meaning of alienation. American Sociological Review, Dec. 1959, 24, 782 - 791.

- Seeman, M. Alienation and Social Learning in a Reformatory. American Journal of Sociology, Nov. 1973, 69, 270-284.
- Seeman, M. Alienation: A Map. Psychology Today, Aug. 1971, 4, 83 - 84 and 94 - 95.
- Selye, H. The physiopathology of stress. Postgraduate Medicine, 25th June, 1959.
- Selye, H. The Stress of Life. London: Longmans Green and Co., 1957.
- Sharpe, D. The Pharmacist. In Management of Minor Illness. London: King Edward's Hospital Fund for London, 1979.
- Shaw, C. A Textbook of Nursing. New York: Appleton and Co., 1885.
- Siegel, H. The Universe of Health: A Conceptualisation. Nursing Forum, 1971, 10, (1), 32 - 35.
- Siegel, H. To your Health - whatever that may mean. Nursing Forum, 1973, 12, (3), 280 - 289.
- Sigerist, H. Medicine and Human Welfare. New Haven, Connecticut: Yale University Press, 1941.
- Simmons, O. Social status and Public health. Social Science Research Council, No.13, New York, 1958.
- Simson, S., and Bleiweiss, L. Transforming the orientation of a Health Organization through community involvement. Journal of Sociology and Social Welfare, Winter 1974, 2, (2), 198 - 206
- Smith, C., Buck, S., Colligan, E., Kerndt, P., and Sollie, T. Differences in importance ratings of selfcare geriatric patients and the nurses who care for them. International Journal of Nursing Studies, 1980, 17, (3), 145 - 153.
- Smith, J. The Challenge of health education for nurses in the 1980s. Journal of Advanced Nursing, 1979, 4, 531 - 543.
- Smith, J. Reality shock for nursing educators. Journal of Advanced Nursing, 1979 b, 4, 235 - 236.
- Snider, J., and Osgood, C. (Eds.) Semantic Differential Technique. Chicago: Aldine, 1969.

- Starfield, B. Measurement of outcomes: A proposed scheme. Milbank Memorial Fund Quarterly, Winter 1974, 39 - 50.
- Steele, J., and McBroom, W. Conceptual and empirical dimensions of Health Behaviour. Journal of Health and Social Behaviour, Dec. 1972, 13, (4), 382 - 392.
- Stokes, B. Self Care: A nation's best health insurance. Science, 10th Aug. 1979, 205, (4406), 547.
- Stone, G. Health and the Health System: A Historical overview and conceptual framework. In Health Psychology. (See G. Stone et. al., 1979.)
- Stone, G., Cohen, F., and Adler, N. (Eds.) Health Psychology. London: Jossey Bass, 1979.
- Straus, M. Deferred gratification, Social Class and the Achievement syndrome. American Sociological Review, 1962, 27.
- Strauss, R. Sociocultural influence upon preventive health behaviour and attitudes towards dentistry. American Journal of Public Health, April 1976, 66, (4), 375 - 377.
- Strickland, B. Locus of control: where have we been and where are we going? Paper presented at the American Psychological Association, Montreal, 1973.
- Strickland, B. Internal Vs External control of Reinforcement. In T. Blass (Ed.) Personality Variables in Social Behaviour. New York: Wiley, 1977.
- Suchman, E. Sociology and the Field of Public Health. New York: Russell Sage, 1963.
- Susser, M., and Watson, W. Sociology and Medicine, (2nd Edn.) London: Oxford University Press, 1971.
- Syme, S. Behavioural factors associated with the etiology of physical disease: A social epidemiological approach. American Journal of Public Health, Nov. 1974, 64, (11), 1043 - 1045.
- Terris, M. Approaches to an epidemiology of Health. American Journal of Public Health, Sept. 1975, 65, (9), 1037 - 1045.
- Tillich, P. The Meaning of Health. Perspectives in Biology and Medicine, Autumn 1961, 5, 92.

- Totman, R. Social Causes of Illness. London: Souvenir Press, 1979.
- Travis, J. Quoted by D. Ardell in High Level Wellness.
(See D. Ardell, 1977.)
- Travis, J. Quoted by P. Flynn in Holistic Health: The Art and Science of Care. Brady: Prentice Hall, 1980. (Also available as Wellness Workbook, J.Travis, Wellness Resource Centre, 42 Miller Ave., Mill Valley, CA. 9494.)
- Tuckett, D., and Kaufert, K. Basic Readings in Medical Sociology. London: Tavistock, 1978.
- Tuma, J. Professional misconduct? Nursing Outlook, Sept. 1977, 25, (9), 546.
- Twaddle, A., and Hessler, R. A Sociology of Health. St. Louis, C.V.Mosby, 1977.
- Vaux, K. This Mortal Coil: The meaning of health and disease. London: Harper and Row, 1978.
- Walborn, K. A Nursing Model for the Hospice: Primary and Selfcare Nursing. Nursing Clinics of North America, Mar. 1980, 15, (1), 205 - 217.
- Wallston, K., Maides, S., and Wallston, B. Health related information seeking as a function of Health related locus of control and Health value. Journal of Research in Personality, 1976, 10, 215 - 222.
- Wallston, B., and Wallston, K. Health care education program: Training patient internality. Paper presented at the American Public Health Association, San Francisco, Nov. 1973.
- Wallston, B., Wallston, K., Kaplan, G., and Maides, S. Development and validation of the Health Locus of Control (HLC) Scale. Journal of Consulting and Clinical Psychology, 1976 b, 44, (4), 580 - 585.
- Walpole, R. (Ed.) Community Health in Australia. Melbourne: Penguin, 1979.
- Wan, T., and Livieratos, B. Interpreting a General Index of subjective wellbeing. Milbank Memorial Fund Quarterly, 1978, 56, (4), 531 - 556.

- wardwell, W. Population density and mobility. American Journal of Public Health, Nov. 1974, 64, (11), 1052-1055.
- Wardwell, W., Bahnson, C., and Caron, H. Social and Psychological factors in coronary heart disease. Journal of Health and Social Behaviour, 1963, 4, 154 - 165.
- White, R. Motivation reconsidered: The concept of competence. Psychological Review, Sept. 1959, 66, 297 - 333.
- Williams, A., and Wechsler, H. Interrrelationships of preventive actions in health and other areas. Health Services Reports, Dec. 1972, 87, (10), 969 - 976.
- Williamson, J. Healthward Care (The semantics of selfcare). Department of General Practices, Guy's Hospital Medical School, London. An unpublished manuscript, quoted by Levin et al., 1976, p.8.
- Williamson, J., and Danaher, K. Self Care in Health. London: Croom Helm, 1978.
- Wilson, M. Health is for People. London: Darton, Longman and Todd, 1975.
- Wilson, R. The Sociology of Health. New York: Random House, 1970.
- World Health Organization. Constitution. World Health Organization, Geneva, 1960.
- Wu, R. Behaviour and Illness. New Jersey: Prentice Hall, 1973.
- Yankauer, A. A Study of periodic school medical examinations: IV. Education Aspects. American Journal of Public Health, 1961, 51, 1532 - 1540.
- Zapka, J., and Averill, B. Self Care for colds: A cost-effective alternative to upper respiratory infection management. American Journal of Public Health, Aug. 1979, 69, (8), 814 - 816.
- Zborowsky, M. Cultural components in response to pain. In E. Jaco (Ed.), Patients, Physicians and Illness. Illinois: Free Press, 1958.
- Zola, I. The concept of trouble and sources of medical assistance - to whom one can turn with what and why. Social Science and Medicine, 1972, 16, 673 - 679.

A P P E N D I C E S

APPENDIX A

HEALTH QUESTIONNAIRE

HEALTH
QUESTIONNAIRE



MASSEY
UNIVERSITY
NURSING STUDIES UNIT 1980

It is most important that you respond to

ALL questions.

1

AGEUnder
20

20-34

35-49

50-64

65 and
over

2

SEX

Male

Female

3

MARITAL
STATUSNever
MarriedMarried
or
De FactoWidowed, or
Divorced, or
Separated, or
Solo Parent

Tick ONE box only

4

OCCUPATION

Please enter here
and include a brief description of your work.

5

In your opinion what is the MAIN reason why people want good health ?

To be able
to work &
look after
themselvesFor the
exhilaration
and
opportunity
it affordsTo avoid the
distress of
being ill

Tick ONE box only

6

In your opinion which of these three statements BEST describes what Health is.

Having a
feeling of
real
wellbeingNot having
anything
wrong with
youFeeling
'balanced'
enough to
work and
do things.

Tick ONE box only

7

The following is a list of pairs of words, (eg, Following.....Leading).

These are words which might be applied to "HEALTH"

For each pair put a tick (✓) in one of the spaces on the scale to show how close one word of the pair comes in describing Health.

A tick placed in the middle of the scale indicates that neither word in that pair is applicable in describing Health. A word that is 'spot on' for describing Health will have a tick put right beside that word - ie, at one end of the scale.

For example; Say the word to be described was Arithmetic, and the pair of words provided was Easy.....Hard. If you thought Arithmetic was fairly easy you would put your tick here -

Easy 1 _ 1 ✓ 1 _ 1 _ 1 _ 1 _ 1 Hard

Record your first reaction regardless of how unrelated the word HEALTH and the other words appear. There are no right or wrong answers. Work fast. Do not struggle over particular items.

HEALTH is:

Following	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Leading
Pleasurable	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Painful
Passive	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Active
Open	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Closed
Colourful	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Colourless
Good	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Bad
Small	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Large
Beautiful	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Ugly
Cowardly	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Brave
Hot	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Cold
Calm	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Excitable
Boring	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Interesting
Strong	1 _ 1 _ 1 _ 1 _ 1 _ 1 _ 1	Weak

8

How do you rate your own health ?

Excellent	Very Good	Good	Fair to Middling	Fair	Poor	Very Poor
-----------	-----------	------	------------------	------	------	-----------

Tick ONE box only

9

How desirable is first-rate health for you ?

Extremely Desirable	Most Desirable	Fairly Desirable	Neither Desirable nor undesirable	Fairly Undesirable	Most Undesirable	Extremely Undesirable
---------------------	----------------	------------------	-----------------------------------	--------------------	------------------	-----------------------

Tick ONE box only

10

If you had each of the conditions listed below, what do you think would be the most likely cause, or causes ?

ENTER ONE OR MORE CAUSES FOR EACH CONDITION.

A heavy chest cold

A severe headache

'Nervy' or depressed

Heart racing/pounding

A stomach upset

11

When people get the conditions listed below, do you think it is due to CHANCE or to FAILURE to take proper precautions ?

Tick the box which indicates your answer.

	CHANCE	FAILURE to take precaution
Tuberculosis. (TB)		
A bad cold		
Poliomyelitis.(Infantile paralysis)		
Tetanus. (Lockjaw.)		
Heart Disease		
Diphtheria		

12

Here is a list of possible reasons for illness.

Firstly: Underline the 3 which
in your opinion are the
most important reasons.

- | | |
|---|-----|
| A virus or germ | () |
| Something you are born with | () |
| Not looking after yourself | () |
| Bad luck | () |
| Environmental Pollution | () |
| Part of the body not
working properly | () |
| Modern lifestyle | () |
| Feeling frustrated or depressed
about trying to cope | () |
| Not enough rest and exercise | () |
| Poor living conditions | () |
| Some of the above reasons
in combination | () |

Secondly: For the three you have
underlined, put a
number, (1,2 or3), in
the bracket provided
to indicate the order
of importance of your
3 choices.
(1=most important.)

13

BESIDE EACH OF THE STATEMENTS BELOW,
ENTER A TICK IN THE APPROPRIATE PLACE
TO SHOW HOW MUCH YOU AGREE OR DISAGREE.

	Strongly Agree	Agree	Neither Agree nor disagree	Disagree	Strongly Disagree
In the long run, one gets the respect that one deserves in this world.					
If you work at it you can stay in good health.					
It is difficult for people to have much control over the things that politicians do.					
People can overcome bad luck if they try.					
People who can't get others to like them don't understand how to get along with people.					
It is usually best to hide one's mistakes.					
Events usually take their own course, no matter what you do.					
Heredity has the major role in determining one's personality.					
With enough effort we can wipe out political corruption.					
A person's worth often passes unnoticed, no matter how hard he tries.					
This world is run by a few people in power, and there's not much the little guy can do about it.					
No matter how hard you try, some people just don't like you.					
Good health is more a matter of luck than what a person does about his health.					
The average citizen can have an influence on government decision-making.					

14

If you were very overweight which of the following three 'treatments' would you prefer to adopt ?

Take a slimming pill before meals.	Join Weightwatchers.	Plan and follow my own diet and exercise programme.
------------------------------------	----------------------	---

Tick ONE box only

15

If you had a weak heart and were advised by your Doctor to cut down on certain activities, which of the following options would you be most likely to choose ?

Follow the Doctor's recommendation and cut down activities so as to maintain the best possible condition.	Despite the Doctor's recommendation continue some favourite activities at a reduced level, accepting the risk.	Cut right down on <u>all</u> activities so as to be really safe.
---	--	--

Tick ONE box only

16

If you were ill, how much 'say' would you want to have concerning your care or treatment ?

Be informed, and take a share in making the final decision about the care.	Do exactly as the Doctor says.	Be given the opportunity to discuss and understand the Doctor's orders.
--	--------------------------------	---

Tick ONE box only

17

Which of the following statements
are true for you ?

TICK ONE BOX ONLY FOR EACH STATEMENT

	TRUE	NOT TRUE	NOT SURE
a / I have consulted a Doctor or Public Health Nurse within the past 2 years.			
b / I belong to at least one Social or Recreational Organization or Club.			
c / I belong to at least one Community or Church "service" Group. (Eg, Meals on Wheels, Rotary, Jaycees, etc.)			
d / I sleep on a firm non-sag mattress.			
e / Each week I spend some time doing something I enjoy.			
f / I have belonged to a health-related group. (Eg, Keep Fit, Weightwatchers, Stop Smoking, Plunket Mothers, etc.)			
g / I have made a change in my lifestyle in the interests of being more healthy. (Eg, Stopped smoking, started taking more exercise, cut right down on alcohol intake, decided not to bear grudges, adjusted food intake, etc.)			
h / I have been immunized for at least 2 of the following: Tetanus (Lockjaw), Diphtheria, Whooping Cough, Measles, Smallpox, Poliomyelitis.			
i / I have taken a cold vaccine or been immunized for 'Flu in the past 3 months.			
j / I cook with, or eat food cooked with, iodised salt.			
k / I have been to the dentist within the past 12 months.			
l / If I cut my finger with a cut about $\frac{1}{4}$ " (5mm) deep and 1" (25mm) long, I would rather treat it myself than go to the Doctor.			
m / If I had a bad back I would be just as likely to go to a Chiropractor as to a Doctor.			
n / If my Doctor disapproved of Chiropractors I would still go to one if I wanted to.			
o / I have asked a Chemist for advice on a health matter recently.			
p / I have had a Medical checkup in the past year.			

17	<u>Continued.</u> q I have been ticketed for a driving, (not parking), offence. r I tend to get involved in Pressure Group/Political activity where Health matters are concerned. s I would want to attend a local meeting arranged to discuss some important health matter. (Eg, Faulty sewage disposal, Water fluoridation, etc.) t I sometimes consult Health reference books. u I like reading health-related articles. v I do not smoke tobacco. w I keep a check on my weight. (ie, weigh myself at intervals.) x I keep my weight in check. (ie, I keep within the limits recommended for my height and build.)	TRUE	NOT TRUE	NOT SURE		
18	Indicate by a tick in the appropriate box the extent to which this applies for you. a As a driver or front seat passenger I use the seat belt when travelling. b I brush my teeth after meals/snacks. c I get as much sleep as I need. d I eat too much. e I drink too much alcohol. f I eat a balanced diet which includes vegetables and protein. g I wash my hands after going to the toilet. h I wash my hands before preparing food.	ALWAYS	MOST TIMES	SOME TIMES	SELDOM	NEVER

18	<u>Continued</u>	ALWAYS	MOST TIMES	SOME TIMES	SELDOM	NEVER
	i/ For short trips I walk, jog, or cycle rather than use a motor vehicle.					
	j/ I have a 15 minute walk, (or bicycle ride) outside each day.					
	k/ I use the stairs in preference to using the lift.					
	l/ I drive when I have been drinking alcohol.					
	m/ When TV shows a health program, I watch it.					

PLEASE CHECK BACK TO
SEE THAT YOU HAVE NOT MISSED
OUT ANSWERING ANYTHING.

ALL ANSWERS ARE OF VALUE

T H A N K Y O U

APPENDIX B

SCORING CONVENTION

For Variable list and question numbers see Table 4-2, p.106.

Variables which yielded nominal data were: Sex, Marital, Consumer, Want health, Describe health and Coincidence (i.e., variables 2,3,5,6,7,8). The variables Age, SES, Own health and Discrepancy (i.e., 1,4,10,11) had ordinal data. All the other variables (i.e., 9, 12-19) had interval data. The variables were scored as follows.

Major Variables

Health concept The "intensity" of health concept was measured by use of the semantic differential. The score for each of the 13 dimensions (see Question 7) ranged from 1-7 with the score of 4 (being central in the scale, and indicating 'neither') being omitted from the calculations. Scores for dimension numbers 2,4,5,6,8,10,13 were reversed. The higher the score the more 'intense' the health concept.

Selfcare Questions 14-16 scored 0-2 depending on the option chosen; questions 17-18 scored 0-3. (See Appendix C, scoring guide.) For question 17, attitude and universal selfcare responses scored 1 and behavioural responses scored 3. In one case (17s) where the attitude was about engaging in a political selfcare behaviour the score was 2. For question 18 a score of 2 or 1 was possible for each item. For the purposes of factor analysis all the 39 items which made up the selfcare variable were scored as 0-1-2 because a factor analysis requires that all items in one variable have the same maximum value.

Locus of Control Of the 14 items which made up this variable items numbered 6 and 8 were not scored because they were filler items. Possible scores on the other 12 items were 1-5 with 3 (the centre of the scale indicating 'neither') being omitted from the calculations. Scores were reversed on items 3,7,10,12,13. The higher the score the more 'internal' was locus of control.

Location of blame for illness.

- (i) Inout The score was constructed by allocating one point for every phrase or word which expressed an idea either of a personal (self-related) source or cause of illness, or of an environmental source or cause, or of personal and environmental causes in interaction. (See Appendix E.) One point was also allocated for 'dont know' or omitted responses. The percentage of personal responses to the total response score was used as the score for the variable, Inout.

(The percentage of interactional responses furnishes a part of the score for the variable, Synergic. Both the Inout and the Synergic scores were also used in scoring question 12 - see below.) The higher the Inout score the more self-related was the location of blame for illness.

- (ii) Self This was a composite score for self-related location of blame for illness. The variable, Self, made use of the Inout score of question 10. The Self score was constructed thus: Take Inout score, add 100, add score for question 12 (for which see below), divide by 10 and round to nearest number.
- Scoring question 12. Of the 11 options provided, five related to the self, five to the environment and one to interactional factors. (See Appendix C, Question 12.) Three options were chosen and ranked, scores¹ being allocated as follows:

¹. It was not until the data analysis had been completed that it was realized that the rank-scoring convention for the variables 'Self', 'Synergic' and 'Environment' could have been improved to give a more even coverage of scores from 100 to 10. See Appendix F.

Number of options	Type of options	Ranks of options	Score
3	Self-related (i.e., personal or P.)	1,2,3	100
2		1,2	90
2		1, 3	80
2		2,3	70
1		1	30
1		2	20
1		3	10

- (iii) Synergic If the one interactional-cause option was chosen in question 12 it was given a score of 30 for rank 1, 20 for 2 and 10 for rank 3.¹ The final synergic score was constructed thus: Take the interactional score from the Inout variable, (see above), multiply by 4, add the interactional score of question 12 and divide by 10.
- (iv) Environment The 'environmental' options of question 12 were scored¹ in the same way as were the self-related options (see above Table.) The resulting interval score was then coded as ordinal thus: 100 coded as 7, 90 as 6, 80 as 5, 70 as 4, 30 as 3, 20 as 2 and 10 as 1.

¹. See footnote, previous page.

Supplementary Variables

Health

Want Health) One of the three options from 'Fun',
Describe Health 'Work', 'Avoid distress' was recorded.

Coincidence If the same category of option was chosen for both questions, 5 and 6, the respondent was coded 'coincident'. A respondent could be coincident for 'Fun', 'Work' or 'Avoid distress'. If the options chosen did not belong in the same category the respondent was coded as 'non-coincident.'

Own health was scored over a range from excellent to poor.
Salience The desirability of first rate health was scored over a range from 'extremely desirable' to 'extremely undesirable'.

Discrepancy The discrepancy between experienced and desired health was assessed as follows: Both questions 8 and 9 were scored from 1-7 with 7 being at the most positive end of the scale (i.e., exceedingly desirable for question 9 and excellent for question 8). The discrepancy between these two scores provided the discrepancy index within which scores could range from 1-6. If for example there were four points between Own health and Desired health with the latter being the greater the code was 6 but if there were no discrepancy the code was 2. Where the health desirability rating was less than the subjective health rating the code was 1 and was referred to as 'reverse discrepancy'.

APPENDIX B (cont'd)

Description of respondent

Age, Sex and Marital status were coded as indicated in Appendix C.

Socio-economic status was scored by using the Irving and Elley (1977) and Elley and Irving (1976) indexes for the New Zealand female and male labour forces, respectively.

Consumer Those who had consulted a health professional within the previous two years were coded as 'consumer' and those who had not, as 'non consumer'.

Prevent Perception of personal responsibility in the prevention of semi-preventable illnesses was scored by giving one point for every citation of 'failure' (rather than 'chance'). The maximum score was 6.

APPENDIX C

QUESTIONNAIRE SCORING
CODE

HEALTH
QUESTIONNAIRE



MASSEY
UNIVERSITY
NURSING STUDIES UNIT 1980

It is most important that you respond to
ALL questions.

1

AGE

Under 20	20-34	35-49	50-64	65 and over
-------------	-------	-------	-------	----------------

1 2 3 4 5

2

SEX

Male	Female
------	--------

0 1

3

MARITAL
STATUS

Never Married	Married or De Facto	Widowed, or Divorced, or Separated, or Solo Parent
------------------	---------------------------	---

Tick ONE box only

0 1 2

4

OCCUPATION

Please enter here
and include a brief description of your work.

5

In your opinion what is the MAIN reason why people want good health ?

0 1 2

To be able to work & look after themselves	For the exhilaration and opportunity it affords	To avoid the distress of being ill
---	---	--

Tick ONE box only

6

In your opinion which of these three statements BEST describes what Health is.

Having a feeling of real wellbeing	Not having anything wrong with you	Feeling 'balanced' enough to work and do things.
---	---	--

Tick ONE box only

0 1 2

5/6 Non coincident : 0

Coincident : 1 = Work, 2 = Fun, 3 = Avoid Distress

7

The following is a list of pairs of words, (eg, Following.....Leading).

These are words which might be applied to "HEALTH"

For each pair put a tick (✓) in one of the spaces on the scale to show how close one word of the pair comes in describing Health.

A tick placed in the middle of the scale indicates that neither word in that pair is applicable in describing Health. A word that is 'spot on' for describing Health will have a tick put right beside that word - ie, at one end of the scale.

For example; Say the word to be described was Arithmetic, and the pair of words provided was Easy.....Hard. If you thought Arithmetic was fairly easy you would put your tick here -

Easy 1 _ 1 ✓ 1 _ 1 _ 1 _ 1 _ 1 Hard

Record your first reaction regardless of how unrelated the word HEALTH and the other words appear. There are no right or wrong answers. Work fast. Do not struggle over particular items.

HEALTH is:

Following	1	1	2	3	1	1	5	6	1	7	1	Leading	
Pleasurable	1	7	1	6	1	5	1	1	3	1	2	1	Painful
Passive	1	1	1	2	3	1	1	5	1	6	1	7	Active
Open	1	7	1	6	1	5	1	1	3	1	2	1	Closed
Colourful	1	7	1	6	1	5	1	1	3	1	2	1	Colourless
Good	1	7	1	6	1	5	1	1	3	1	2	1	Bad
Small	1	1	1	2	3	1	1	5	1	6	1	7	Large
Beautiful	1	7	1	6	1	5	1	1	3	1	2	1	Ugly
Cowardly	1	1	1	2	3	1	1	5	1	6	1	7	Brave
Hot	1	7	1	6	1	5	1	1	3	1	2	1	Cold
Calm	1	1	1	2	3	1	1	5	1	6	1	7	Excitable
Boring	1	1	1	2	3	1	1	5	1	6	1	7	Interesting
Strong	1	7	1	6	1	5	1	1	3	1	2	1	Weak

8	How do you rate your own health ? <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td>Excellent</td> <td>Very Good</td> <td>Good</td> <td>Fair to Middling</td> <td>Fair</td> <td>Poor</td> <td>Very Poor</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> </table> Tick ONE box only 8/9 Discrepancy : score for Q8 - score for Q9 =							Excellent	Very Good	Good	Fair to Middling	Fair	Poor	Very Poor	1	2	3	4	5	6	7							
Excellent	Very Good	Good	Fair to Middling	Fair	Poor	Very Poor																						
1	2	3	4	5	6	7																						
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Extremely Desirable	Most Desirable	Fairly Desirable	Neither Desirable nor undesirable	Fairly Undesirable	Most Undesirable	Extremely Undesirable																						
1	2	3	4	5	6	7																						
10	If you had each of the conditions listed below, what do you think would be the most likely cause, or causes ? ENTER ONE OR MORE CAUSES FOR EACH CONDITION. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">A heavy chest cold</td> <td></td> </tr> <tr> <td>A severe headache</td> <td></td> </tr> <tr> <td>'Nervy' or depressed</td> <td></td> </tr> <tr> <td>Heart racing/pounding</td> <td></td> </tr> <tr> <td>A stomach upset</td> <td></td> </tr> </table>							A heavy chest cold		A severe headache		'Nervy' or depressed		Heart racing/pounding		A stomach upset												
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11	When people get the conditions listed below, do you think it is due to CHANCE or to FAILURE to take proper precautions ? Tick the box which indicates your answer. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">CHANCE</th> <th style="width: 20%; text-align: center;">FAILURE to take precaution</th> </tr> </thead> <tbody> <tr> <td>Tuberculosis. (TB)</td> <td></td> <td></td> </tr> <tr> <td>A bad cold</td> <td></td> <td></td> </tr> <tr> <td>Poliomyelitis. (Infantile paralysis)</td> <td></td> <td></td> </tr> <tr> <td>Tetanus. (Lockjaw.)</td> <td></td> <td></td> </tr> <tr> <td>Heart Disease</td> <td></td> <td></td> </tr> <tr> <td>Diphtheria</td> <td></td> <td></td> </tr> </tbody> </table> Count 1 for ↑ each tick								CHANCE	FAILURE to take precaution	Tuberculosis. (TB)			A bad cold			Poliomyelitis. (Infantile paralysis)			Tetanus. (Lockjaw.)			Heart Disease			Diphtheria		
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Heart Disease																												
Diphtheria																												

12

Here is a list of possible reasons for illness.

Firstly: Underline the 3 which in your opinion are the most important reasons.

- | | | |
|----------|--|-------|
| Env | A virus or germ | () |
| Personal | Something you are born with | () |
| P | Not looking after yourself | () |
| E | Bad luck | () |
| E | Environmental Pollution | () |
| P | Part of the body not working properly | () |
| E | Modern lifestyle | () |
| P | Feeling frustrated or depressed about trying to cope | () |
| P | Not enough rest and exercise | () |
| E | Poor living conditions | () |
| Syn | Some of the above reasons in combination | () |

Secondly: For the three you have underlined, put a number, (1,2 or3), in the bracket provided to indicate the order of importance of your 3 choices.
(1=most important.)

13

BESIDE EACH OF THE STATEMENTS BELOW,
ENTER A TICK IN THE APPROPRIATE PLACE
TO SHOW HOW MUCH YOU AGREE OR DISAGREE.

	Strongly Agree	Agree	Neither Agree nor disagree	Disagree	Strongly Disagree
In the long run, one gets the respect that one deserves in this world.	5	4		2	1
If you work at it you can stay in good health.	5	4		2	1
It is difficult for people to have much control over the things that politicians do.	1	2		4	5
People can overcome bad luck if they try.	5	4		2	1
People who can't get others to like them don't understand how to get along with people.	5	4		2	1
It is usually best to hide one's mistakes.					
Events usually take their own course, no matter what you do.	1	2		4	5
Heredity has the major role in determining one's personality.					
With enough effort we can wipe out political corruption.	5	4		2	1
A person's worth often passes unnoticed, no matter how hard he tries.	1	2		4	5
This world is run by a few people in power, and there's not much the little guy can do about it.	1	2		4	5
No matter how hard you try, some people just don't like you.	1	2		4	5
Good health is more a matter of luck than what a person does about his health.	1	2		4	5
The average citizen can have an influence on government decision-making.	5	4		2	1

14

If you were very overweight which of the following three 'treatments' would you prefer to adopt ?

Take a slimming pill before meals.	Join Weightwatchers.	Plan and follow my own diet and exercise programme.
------------------------------------	----------------------	---

0

1

2

Tick ONE box only

15

If you had a weak heart and were advised by your Doctor to cut down on certain activities, which of the following options would you be most likely to choose ?

Follow the Doctor's recommendation and cut down activities so as to maintain the best possible condition.	Despite the Doctor's recommendation continue some favourite activities at a reduced level, accepting the risk.	Cut right down on <u>all</u> activities so as to be really safe.
---	--	--

1

2

0

Tick ONE box only

16

If you were ill, how much 'say' would you want to have concerning your care or treatment ?

Be informed, and take a share in making the final decision about the care.	Do exactly as the Doctor says.	Be given the opportunity to discuss and understand the Doctor's orders.
--	--------------------------------	---

2

0

1

Tick ONE box only

17

Which of the following statements
are true for you ?

TICK ONE BOX ONLY FOR EACH STATEMENT

	TRUE	NOT TRUE	NOT SURE
a I have consulted a Doctor or Public Health Nurse within the past 2 years.	C		
b I belong to at least one Social or Recreational Organization or Club.	1		
c I belong to at least one Community or Church "service" Group. (Eg, Meals on Wheels, Rotary, Jaycees, etc.)	1		
d I sleep on a firm non-sag mattress.	1		
e Each week I spend some time doing something I enjoy.	1		
f I have belonged to a health-related group. (Eg, Keep Fit, Weightwatchers, Stop Smoking, Plunket Mothers, etc.)	2		
g I have made a change in my lifestyle in the interests of being more healthy. (Eg, Stopped smoking, started taking more exercise, cut right down on alcohol intake, decided not to bear grudges, adjusted food intake, etc.)	3		
h I have been immunized for at least 2 of the following: Tetanus(Lockjaw), Diphtheria, Whooping Cough, Measles, Smallpox, Poliomyelitis.	1		
i I have taken a cold vaccine or been immunized for 'Flu in the past 3 months.	3		
j I cook with, or eat food cooked with, iodised salt.	1		
k I have been to the dentist within the past 12 months.	3		
l If I cut my finger with a cut about $\frac{1}{4}$ " (5mm) deep and 1" (25mm) long, I would rather treat it myself than go to the Doctor.	1		
m If I had a bad back I would be just as likely to go to a Chiropractor as to a Doctor.	1		
n If my Doctor disapproved of Chiropractors I would still go to one if I wanted to.	1		
o I have asked a Chemist for advice on a health matter recently.	1		
p I have had a Medical checkup in the past year.	1		

17	Continued.	TRUE	NOT TRUE	NOT SURE
	q I have been ticketed for a driving, (not parking), offence.		1	
	r I tend to get involved in Pressure Group/Political activity where Health matters are concerned.	3		
	s I would want to attend a local meeting arranged to discuss some important health matter. (Eg, Faulty sewage disposal, Water fluoridation, etc.)	2		
	t I sometimes consult Health reference books.	1		
	u I like reading health-related articles.	1		
	v I do not smoke tobacco.	3		
	w I keep a check on my weight. (ie, weigh myself at intervals.)	1		
	x I keep my weight in check. (ie, I keep within the limits recommended for my height and build.)	3		

18	Indicate by a tick in the appropriate box the extent to which this applies for you.	ALWAYS	MOST TIMES	SOME TIMES	SELDOM	NEVER
	a As a driver or front seat passenger I use the seat belt when travelling.	2	1			
	b I brush my teeth after meals/snacks.	2	1			
	c I get as much sleep as I need.	2	1			
	d I eat too much.				1	2
	e I drink too much alcohol.				1	2
	f I eat a balanced diet which includes vegetables and protein.	2	1			
	g I wash my hands after going to the toilet.	2	1			
	h I wash my hands before preparing food.	2	1			

18	<u>Continued</u>	ALWAYS	MOST TIMES	SOME TIMES	SELDOM	NEVER
	i/ For short trips I walk, jog, or cycle rather than use a motor vehicle.	2	1			
	j/ I have a 15 minute walk, (or bicycle ride) outside each day.	2	1			
	k/ I use the stairs in preference to using the lift.	2	1			
	l/ I drive when I have been drinking alcohol.					2
	m/ When TV shows a health program, I watch it.	2	1			

PLEASE CHECK BACK TO
SEE THAT YOU HAVE NOT MISSED
OUT ANSWERING ANYTHING.

ALL ANSWERS ARE OF VALUE

T H A N K Y O U

APPENDIX D(i)

COVERING LETTER

August, 1980.

Your name has been selected in a random sample of Massey staff. I am writing to invite you to participate in a study about health which I am undertaking as part of my Masterate thesis in Nursing Studies. In order to conduct my study I need the unique contribution that you can make. Enclosed is a Questionnaire which I would be most grateful to have you fill in. It may be returned in the enclosed envelope via the internal mail. If you are quite unable at this time to complete the Questionnaire would you please return it to me, anyway. However, I do hope you will fill it in as your help in this matter is very important for the study. The early return of the Questionnaire will be much appreciated.

With thanks in anticipation,

Elizabeth Nevatt,
Masterate student,
Nursing Studies Unit.

APPENDIX D (ii)

REMINDER LETTER

Dear

I hope you have received the Health Questionnaire I sent you not so long ago. I am taking the liberty of writing to jog your memory if you have not found time to complete it. (If this letter and your returned questionnaire have crossed in the mail, please overlook this reminder and accept my appreciation of your help.)

So far there has been nearly a 70% response which is very encouraging. However I am hoping for a 100% response rate ! If you would now complete the questionnaire you will make the effort of the 70% of the respondents usable. (If you have mislaid the Questionnaire and would like another copy, you can phone a message through to me c/o the Nursing Studies Office.)

With many thanks for your cooperation,

Elizabeth Nevatt,
Masterate Student,
Nursing Studies Department.

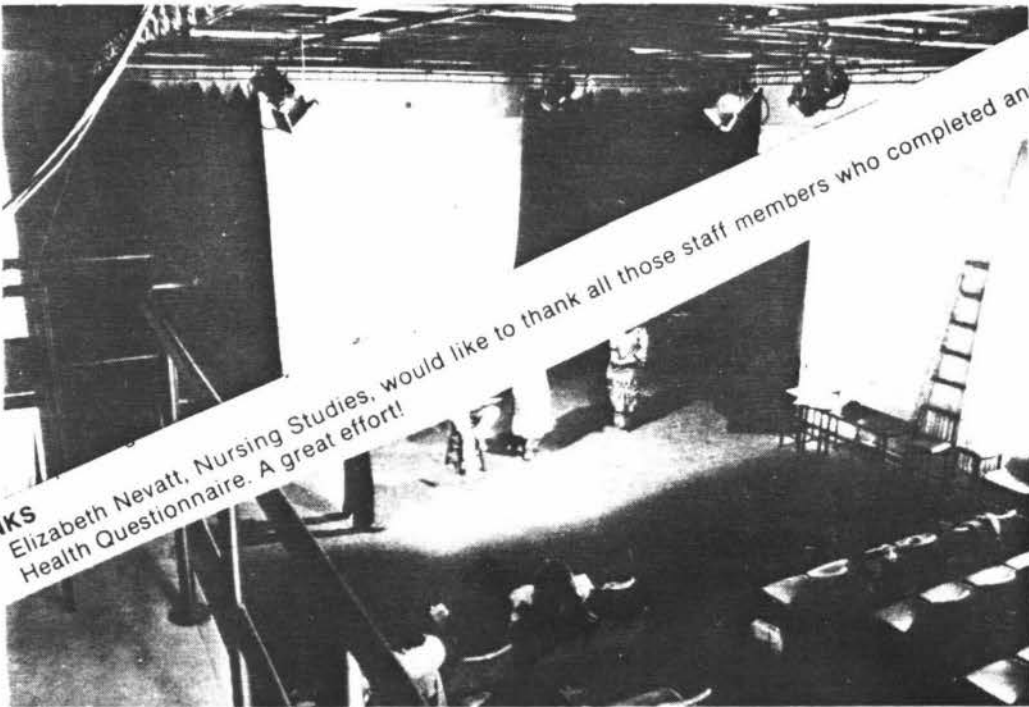
APPENDIX D (iii)

APPRECIATION NOTE.



**A NEWS BULLETIN FOR THE CAMPUS
AND RESEARCH COMMUNITY**
Week Ending 28th September 1980

CAMPUS NEWS



THANKS

Elizabeth Nevatt, Nursing Studies, would like to thank all those staff members who completed and returned the Health Questionnaire. A great effort!

APPENDIX E

RESPONSES TO QUESTION 10.

Self-related responses include those which refer to the person himself either physically, emotionally or conatively. If the response indicates that the respondent did something that he recognised to be unwise, or avoidable, the response is classified as self-related (i.e., personal). If the response locates the cause of illness in the environment - be it physical or social - it is classified as non self-related (i.e., environmental). For example, the response "eating contaminated food", "getting a fright" is classified as non self-related whereas "eating junk food" and "being frightened" are classified as self-related. If the response attributes the blame for illness to an interaction of causes it is classed as multicausal.

Responses repeated in subsequent sections of the question may be omitted from the subsequent list(s).

Heavy chest cold

Self-related (personal)

Weak chest, bronchitis, asthma, poor health, chilled body, insufficient clothing, not taking something, wrong food, poor diet, not taking vitamin C, smoking, late nights, insufficient sleep, not looking after myself, low resistance, run down.

Non self-related (environmental)

Virus, infection, draft, cold conditions, change of conditions

(temperature and climate), room not ventilated, unhealthy atmosphere, got wet, overworked.

Multicausal

Not enough warm clothes on a wet or cold day, caught in rain when jogging, caught infection when run down.

Severe headache

Self-related (personal)

Migraine, sinus, tension, worry, nerves, anxiety, depression, fatigue, eyestrain, strain, overworking, tumour, period due, high BP, too much booze, getting sick, side effect of flu, dehydration, circulation, constipation, blood quality, hormone imbalance, too much smoking, being out of routine, having high temperature, too much reading, not wearing glasses.

Non self-related (environmental)

Poor lighting, close work, room too hot, stress, loud noise, bright light, (other people's) cigarette smoke, environmental conditions, pressure at work, not enough fresh air.

Multicausal

Reading in poor light, tension due to work conditions.

Nervy, depressed

Self-related (personal)

Worry, fear, lonely, unhappy, not enough proper food, emotional tension, pre-menstrual tension, overtired, lack of pyridoxine, living, highly strung, frustration, wrong food, uncertainty, failure, too much tea or coffee, spiritual matter, anger, scared, feeling ill, allowing minor things to become major in one's mind, emotions, tinnitus, psychological problems, personal disappointment, inadequacy, low

APPENDIX E (cont'd)

biorhythm, natural disposition, not getting enough social contact.

Non self-related (environmental)

Circumstances, bad news, marital problems, money matters, social problems, work problems, chemical circumstances, physical circumstances, social pressure, exams, upsetting situations, pressures (work or home), continuous strain, atmospheric pressure, upsets, things not going well, your questionnaire, bereavement, lack of understanding from associates, impending confrontation.

Multicausal

No holiday during winter, bad weather when feeling off-colour.

Heart racing/pounding

Self-related (personal)

Overproduction of adrenalin, excitement, exercise, stress on heart, heart condition, overweight, unfit, nervous, fearful, being late, forgot an appointment, state of mind, exhaustion, too many cigarettes, overuse of broncho-dilator, expectation of event, high temperature, menopause.

Non self-related (environmental)

Frightening circumstances, got a fright, good news, sport, stressful situation, infectious disease, see person you love/hate.

Multicausal

Exercise when unfit.

Stomach upset

Self-related (personal)

Too much booze/rich food, too much wrong food, not eating

APPENDIX E (cont'd)

properly, worry, indigestion, overworking, pregnant, nerves, menstrual, gastroenteritis, eating too fast, stomach ulcer, gluttony, fear, tension.

Non self-related (environmental)

Bacterial infection, something eaten, food not agreeing with me, ate something bad/gone off, drank something bad, had something that disagreed, food poisoning, tummy bug, bad food, food not properly cooked, contaminated food, travelling long distance, acidic food, precooked food, chance.

APPENDIX F

IMPROVED SCORING FORMAT FOR RANKS

Location of attributed blame for illness: 3 variables*					
Self-related SELF		Non self-related ENVIRONMENT		Multicausal SYNERGIC	
Rank	Score	Rank	Score	Rank	Score
1,2,3	100	1,2,3	100		
1,2	90	1,2	90		
1, 3	80	1, 3	80		
2,3	70	2,3	70		
1	60	2	50	3	70
1	60	3	40	2	80
2	50	1	60	3	70
3	40	1	60	2	80
3	40	2	50	1	90
2	50	3	40	1	90
		2,3	70	1	90
		1, 3	80	2	80
		1,2	90	3	70
2,3	70			1	90
1, 3	80			2	80
1,2	90			3	70

*

Question 12 in Questionnaire

APPENDIX G (i)

QUESTIONNAIRE INTERVAL DATA FILE

Column identifiers:

- | | | |
|-------------|---------------------|---------------------|
| 1. Health | 5. Environment | 9. Selfcare(Q14-17) |
| 2. Inout | 6. Locus of control | |
| 3. Synergic | 7. Selfcare | 10. Selfcare(Q.18) |
| 4. Self | 8. Selfcare(Q14-16) | |

Subject * code number	Column identifiers									
	1	2	3	4	5	6	7	8	9	10
110	46	17	21	20	0	33	29	3	20	9
120	72	67	00	20	4	16	29	6	17	3
130	54	57	00	24	1	38	17	3	10	7
140	76	20	00	20	2	41	40	6	31	9
150	80	100	01	22	3	40	40	5	29	11
160	66	100	00	27	3	40	35	4	27	8
170	50	53	03	17	1	28	33	4	27	11
180	75	62	02	17	3	29	36	4	20	9
190	80	99	00	27	1	34	41	4	31	10
200	75	83	03	19	2	40	37	4	30	9
210	53	47	00	15	7	36	36	6	27	8
220	75	50	00	23	1	47	40	6	29	11
230	63	33	01	16	2	28	37	4	25	17
240	44	57	08	24	0	36	30	4	21	9
250	81	40	01	17	2	27	38	4	25	13
260	62	25	02	13	5	32	34	5	24	10
270	65	50	10	22	0	38	26	4	19	7
280	68	38	02	22	0	41	40	4	29	11
290	77	78	04	26	2	31	33	3	23	10
300	47	60	02	16	5	32	36	4	27	9
310	74	65	00	17	4	23	33	6	24	9
320	52	69	02	24	3	29	31	4	24	7
330	28	83	00	25	3	25	29	3	20	9
340	68	75	01	20	3	22	35	5	28	7
350	39	83	00	25	3	38	34	3	26	8
360	49	60	00	24	2	17	34	5	23	11
370	61	73	03	18	2	40	31	4	26	5
380	54	67	00	25	2	38	32	4	27	5
390	45	80	00	27	1	24	41	4	29	13
400	52	88	03	20	2	44	33	5	29	4
410	69	67	00	26	1	36	43	5	28	15
420	72	63	00	23	3	30	33	5	23	10
430	45	64	03	17	2	18	36	6	29	7
440	42	75	00	19	6	26	30	5	27	7
450	57	83	00	28	0	35	35	3	21	10

(cont'd...

* With the exception of the early entries the order of subjects is not the same from one data file to another.

APPENDIX C (i) cont'd.

Subject code number	Column identifier									
	1	2	3	4	5	6	7	8	9	10
460	99	99	99	99	99	00	22	5	11	8
470	51	58	01	19	2	46	39	4	24	13
480	38	56	02	16	5	18	27	3	19	9
490	53	60	01	16	6	32	36	5	27	9
500	16	60	08	25	1	30	35	5	27	8
510	63	67	02	18	3	38	34	3	24	8
520	63	60	01	19	2	18	44	4	30	14
530	80	78	01	20	3	36	34	5	25	9
540	52	86	01	28	0	38	37	5	26	11
550	76	86	02	20	3	30	38	3	27	11
560	54	80	00	20	5	32	23	3	18	5
570	70	71	01	19	3	43	31	6	23	8
580	67	71	00	19	5	32	37	4	26	11
590	62	67	00	20	5	36	27	5	20	7
600	60	69	03	26	1	38	37	4	26	11
610	34	40	00	16	5	30	31	6	22	9
620	57	00	00	20	0	34	37	5	27	10
630	74	60	00	23	3	33	19	6	14	5
640	49	100	00	23	3	34	35	3	27	8
650	80	71	06	20	4	36	40	4	31	9
660	52	29	00	16	4	33	39	4	27	12
670	43	55	01	18	3	15	27	4	21	6
680	69	71	00	26	1	26	30	5	21	9
690	80	83	05	29	0	28	16	2	13	3
700	70	80	01	20	3	32	27	5	17	8
710	00	90	03	19	4	19	30	3	21	9
720	69	67	00	25	2	48	33	4	28	5
730	84	63	00	24	2	43	40	4	28	12
740	50	86	02	20	3	42	27	3	19	8
750	40	50	00	17	5	30	42	4	30	12
760	45	71	02	17	5	06	30	4	21	9
770	40	80	03	19	2	35	26	4	19	7
780	48	77	03	20	1	42	42	4	31	11
790	83	38	00	16	5	39	42	4	31	11
800	27	75	00	23	3	30	34	5	27	7
810	47	100	02	28	0	25	33	3	23	10
820	99	99	00	99	3	36	29	5	22	17
830	80	63	08	23	0	30	29	2	21	8
840	74	25	03	14	2	17	34	4	26	8
850	62	67	00	19	1	29	38	5	27	11
860	67	71	00	24	3	29	40	4	27	13
870	54	50	00	15	7	35	30	3	23	7
880	57	50	02	23	0	14	39	6	30	9
890	57	44	02	24	0	36	36	4	29	7
900	77	40	06	22	2	41	30	5	23	7
910	11	63	04	17	3	24	34	4	25	9
920	35	45	03	16	2	42	36	3	28	8
930	84	80	00	19	6	31	30	3	21	9
940	29	99	09	99	01	42	30	3	22	8
950	57	46	07	24	00	28	39	3	30	9
960	15	83	00	19	05	18	36	5	28	8

APPENDIX C (ii)

QUESTIONNAIRE CROSSTABULATION DATA FILE

Column identifiers

- | | |
|---------------------------|-----------------------|
| 1. Age | 11. Salience |
| 2. Sex | 12. Inout |
| 3. Marital (MAR) | 13. Prevent (CHFAIL) |
| 4. SES | 14. Synergic (SYN) |
| 5. Want health (WANTH) | 15. Self (GCAUSE) |
| 6. Describe health (DESH) | 16. Environment (EXT) |
| 7. Coincidence (COCID) | 17. Locus of control |
| 8. Health concept (HSTR) | 18. Consumer |
| 9. Own health (OWNH) | 19. Selfcare |
| 10. Discrepancy (DISCY) | |

VARIABLE LIST

(Labels)

AGE,SEX,MAR,SES,WANTH,DESH,
HCOCID,HSTR,OWNH,
HDISCY,SALIENCE,INOUT,CHFAIL,
SYN,GCAUSE,EXT,LOCUS,
CONSUMER,SELFCARE

VALUE LABELS

AGE (1)19 AND UND (2)20-34 (3)35-49
(4)50-64 (5)65 AND OVER/
SEX (0)MALE (1)FEM/ MAR (0)NEV
(1)MAR (2)BEREFT/ SES (1)TOP (2)UPR
(3)UM (4)M (5)LM (6)L/
WANTH (0)WORK (1)FUN (2)XD/
DESH (0)FUN (1)XD (2)WORK/
HCOCID (0)NON (1)COWORK (2)COWELL (3)COXD/
HSTR (0)0-48 (1)49-65 (2)66-100/
OWNH (1)EX (2)VG (3)G (4)F-M (5)F/
SALIENCE (1)1 (2)2 (3)3/
HDISCY (0)REV-NIL (1)1 (2)2-3/
INOUT (0)0-54 (1)55-73 (2)74-100/
CHFAIL (0)0-3 (1)4 (2)5-6/
SYN (0)0 (1)1 (2)2-30/
GCAUSE (0)0-19 (1)20-22 (2)23-30/
EXT (0)0-1 (1)2-3 (2)4-7/
LOCUS (0)0-27 (1)28-35 (2)36-50/
CONSUMER (0)NO (1)CON/
SELFCARE (0)1-31 (1)32-35 (2)36-50

MISSING VALUES

WANTH(3)/DESH(3)/HCOCID(4)/
HSTR(7)/INOUT(5)/SYN(7)/
GCAUSE(5)/EXT(8)/SELFCARE(5)

APPENDIX G (ii) cont'd.

QUESTIONNAIRE CROSSTABULATION DATA FILE

Column identifier		Column identifier	
Subject code number	123456789 12 15 18 10 13 16 19 11 14 17	Subject code number	123456789 12 15 18 10 13 16 19 11 14 17
110	3013220020200210110	540	2103102131222120212
120	3024021221110012010	550	2013102231222211112
130	3014110110210020210	560	3003120142120012110
140	4113102221100011212	570	2013102221111101210
150	4023000221120111212	580	1103021232111002112
160	4113000221121021211	590	2003000121110012210
170	2103200132102200111	600	1103220130310220212
180	2113102210112201112	610	3012213020202002110
190	2103021231220020112	620	2113021121101010112
200	3114000220220201212	630	4026220241311021110
210	3113102121100002212	640	3104000120201021111
220	4002000221202020212	650	3012102220211212212
230	3113120110101101102	660	3112110110201002112
240	3114000020211220210	670	3113102020210101010
250	4023021221100101002	680	2003000141312020000
260	2113102121101202111	690	4013021231222220110
270	2003200120201210200	700	4013102221121111110
280	2103200221101210212	710	2103010032121202010
290	1104010221121221111	720	4016000230311021211
300	3113000020212202112	730	3013120231211021212
310	2013000220211002011	740	2112000121122211210
320	2013200120212221100	750	3012000020202002112
330	4113102021120021010	760	2116000030310202010
340	1103102231220111011	770	4113021020221201110
350	3113200031222021211	780	2112000031222210212
360	2114021130310021001	790	3013010220201002212
370	1103021131211201200	800	3013220032120021111
380	2113000120210021211	810	4013021021122220011
390	4016102010122020012	820	3113000742251051210
400	3123010132221211211	830	2003220252312220110
410	2123000210111020212	840	3113102221101201011
420	3014120221112021111	850	4113010121112000112
430	2003102020312201012	860	1103110230310021112
440	3013010031222002010	870	2104102142100002110
450	4016000120220020212	880	2123334120200220012
460	4012213741350758010	890	2103010121101220212
470	2103102120312101212	900	3012102231200011210
480	2103213021110202000	910	1103021021112201011
490	3114102121312102112	920	2013120030300201212
500	2113213020311220111	930	4015102221120002110
510	3113000131212201211	940	3114200042252250210
520	3114102131210101012	950	2003031121101220112
530	2003021232121111211	960	2104102021120002012

APPENDIX C (iii)

FACTOR ANALYSIS DATA FILE

Column identifiers

Columns 1 - 13 Health concept items (c.f. Q.7: N=13)

Columns 14- 25 Locus of control items (c.f.Q.12: N=12)

Columns 26- 64 Selfcare items (c.f. Qs.14-18: N=39)

Subject code number	Columns 1-13	Columns 14-25
110	2660663750500	441442021254
120	6766770760677	201122121121
130	0770770700667	545400424244
140	5777776763167	424454424224
150	0777777773777	452452242244
160	0777777777111	452442224254
170	0773770360037	154020014254
180	5666677760766	044402044250
190	5777775657665	452402440144
200	6677775770277	442444242244
210	6675070700357	414024225255
220	0777677775177	454454422454
230	3670677760076	042022242442
240	0630575606676	424204040440
250	0660570600266	444044044044
260	5776677777177	004422422250
270	0776770700777	022244422244
280	5766570750377	441444222254
290	5667676705076	440444444054
300	7677677750567	440242042450
310	5550060555065	242444022242
320	6675677655266	424421002040
330	0650675606056	402452002244
340	7000070700007	221122142251
350	5666666660267	040422204004
360	0760070700066	222444424244
370	2326565626303	040400202050
380	5750675705266	444044244244

(cont'd....)

APPENDIX G (iii) cont'd

FACTOR ANALYSIS DATA FILE....

Subject code number	Columns 1-13	Columns 14-25
390	0670670770167	442454144042
400	2707671700107	042442201041
410	0500070700307	044445524244
420	6677577700077	404454444254
430	6665776750266	142522540254
440	7677770665077	542410142151
450	0660560603355	202024024002
460	5550570500055	022404044024
470	0676507676266	454542221151
480	0707770700277	555040555255
490	0660070600067	004000224204
500	3755570600555	444004404044
510	0600070000000	452000000250
520	0550060000000	440444040240
530	5565570755355	042444424244
540	7777777700007	002442000402
550	7777773775277	551142152451
560	6760570500367	444400444244
570	6665576556766	044004242244
580	0565505553177	422242441421
590	6766665666656	442442544244
600	0766773555565	551042142242
610	0765675750257	040505044554
620	3777676600056	454400425244
630	5560370600200	424044204204
640	0777770770107	242440224442
650	7666665566267	442404204054
660	0770070770077	242002444444
670	6666666766667	442404442044
680	0760660650565	452444043040
690	0650670600076	041004200040
700	6776570600050	242040422051
710	7776767776715	241252121251
720	0777777770077	442022024444
730	0000000000000	520240022200
740	6676560765267	545442525444

(cont'd...

APPENDIX G (iii) cont'd

FACTOR ANALYSIS DATA FILE ...

Subject code number	Columns 1-13	Columns 14-25
750	7777777770777	444540444244
760	0670670700656	452444424252
770	0665550500260	241240242252
780	0760670500266	002200000200
790	0560560700065	025244412254
800	7075500660066	454424404254
810	6777677777177	441444242244
820	3600050500305	422244242202
830	5050055565335	441000514204
840	0000000000000	444400424244
850	2776777775576	441242411142
860	7775775750377	001240110242
870	2775677700266	402444000254
880	7665675760676	442241002244
890	0770770600677	244442225240
900	0655670605566	042110140100
910	0770670750576	252454412151
920	6777776660675	444444440045
930	0140000000502	040240004244
940	0760070000267	442444541244
950	7777777777777	441452121241
960	0000000000000	000000000000

(cont'd....

APPENDIX G (iii) cont'd

FACTOR ANALYSIS DATA FILE...

Subject code number	Columns 26-64		
	Q14- 16	Q17	Q18
110	210	22220220220000200000220	1011112220100
120	222	20220020202020000000200	0100101200000
130	210	22220000020000000000000	1210012201100
140	222	22222220222020000002222	2011212200201
150	212	00220222220000200202222	2120222222020
160	211	20222220200222200022222	2110112200101
170	112	00222220220000220202020	2220122102200
180	112	20220220222220220022222	1111121000222
190	211	22222220222022220022222	2010212012220
200	112	20222220220222202002222	2110112210220
210	222	00222020222222020202022	2010022210220
220	222	22222220222000220022022	2111222210101
230	211	22222220202000020002222	0110222222220
240	111	20222220220222220222222	2111122021100
250	211	20222020220000020022022	2120112200021
260	211	20222020222220020022220	2220012222202
270	221	20220020220220220020202	2021222200020
280	121	20220220200000020022220	1010112121100
290	112	20222220020020020222222	2110122222001
300	111	22222220020222020022020	2000122122102
310	211	20222220200220220022222	2010122210021
320	222	20220020222000220000222	1210112211100
330	211	00220220220220000020222	2110111110100
340	111	00222220220020020022020	2210002200122
350	122	20220220222020020022222	1110121111100
360	111	00222220220022020222220	2010212200020
370	212	00220220220200020000202	2200212210022
380	112	20220220220220000022222	2101011110000

(cont'd....

APPENDIX G (iii) Cont'd

FACTOR ANALYSIS DATA FILE ...

Subject code number	Columns 26-64		
	Q14- 16	Q17	Q18
390	211	22222220202022000022222	0000012200200
400	211	20220220222022020022222	2021220122222
410	111	20200020222020220020222	2111212000020
420	122	20222220220020020022222	2011011000000
430	212	00222220220002220222220	2220122221122
440	221	22220220020220200000022	2210122200201
450	222	20220220220022220020222	2000221201100
460	212	20220022220020220000220	2100112210100
470	111	22220020200220220202022	2222122212202
480	211	22220220222002020202220	2111222211220
490	111	02220220000002000002202	2110212200020
500	221	22220220220002220222220	2110112200120
510	212	22222220222000200000222	2110012211100
520	122	22222220220000220022220	2020022202000
530	111	22222220220220220002022	2010112210101
540	121	22222220202202202222222	2221122220220
550	212	20020220200222220222220	2210012211100
560	212	20220220220000220222022	2210122211120
570	111	20222220220020020022222	2111112212002
580	021	00020220202000200000222	0002022200000
590	222	22220020220220000200220	2011122100101
600	211	22222220220022020002220	2110212212200
610	221	20022020222020000000022	1111012112000
620	211	20222220022220020022220	2010222111121
630	222	20220020202000000022222	2110112210200
640	212	20222220220000200002222	2100222210120
650	222	20220000200220000200000	0011110102000
660	111	20222220222000200022222	2111221010100
670	211	22222220220220220022222	0111112200122
680	211	20222220220000220002222	2221222201101
690	211	20220020200000020222222	1210012200000
700	212	00220020220020020000222	2110122210100

(cont'd....

APPENDIX G (iii) cont'd
FACTOR ANALYSIS DATA FILE.

Subject code number	Columns 26-64		
	Q14- 16	Q17	Q18
710	110	20220020220000220000020	1110100001000
720	212	22220000222000020002200	2110211100021
730	210	20020220220002220020220	2110212210100
740	211	22220220222002200200222	2010012200000
750	211	22222220220220200202022	2222122220001
760	111	20222220202000000020022	2110112200101
770	211	20220220220220220222222	2110111222221
780	211	00220220220022020000220	2010222210020
790	211	22220020200020020000222	1001211200020
800	112	00222220200022222222222	2110222210021
810	112	02220220222222202022222	2010222211121
820	212	02020220220020220022222	0110222000020
830	210	20220220220000200002222	2220012211020
840	221	20222220202002200000220	1110112210000
850	011	22222220220002200022020	2010212211000
860	211	20222220200222220000222	0210022200201
870	212	20222220220020220022220	2110222122200
880	211	00220220220202220022022	2120112222121
890	111	0022000222222220020220	1100112210200
900	222	22220220222002220002222	2001111122120
910	112	20222220220022200022222	2000012210201
920	221	20220200220020200022220	2110112200001
930	211	20220220220000020022222	2110101122101
940	111	20222220222222200220022	2111111200020
950	201	20200220200222200220020	2120122210001
960	221	00200020202020020000200	2020012120200

APPENDIX G (iv)

MINIQ DATA FILE

Column identifiers

- | | |
|---------------------|-------------|
| 1. Health concept | 4. Selfcare |
| 2. Locus of control | 5. Self |
| 3. Environment | 6. Synergic |

Subject code number	Column identifier	Subject code number	Column identifier
	1 2 3 4 5 6		1 2 3 4 5 6
100	151108062021	4400	171006072801
200	140410052000	4500	210606102002
300	211005042400	4600	221005082000
400	240810092000	4700	141001091901
500	241013082201	4800	251004101900
600	281113072700	4900	130710052000
700	141105081703	5000	241006072603
800	200707101702	5100	221011091600
900	260902102700	5200	191411102000
1000	181004091903	5300	201004102300
1100	131206081500	5400	120614052300
1200	261106092300	5500	141210082006
1300	211009091601	5600	230907051600
1400	230805112408	5700	141203091801
1500	130803071701	5800	240810092600
1600	280708091302	5900	130414092905
1700	141016062210	6000	130408052001
1800	141105052202	6100	140604051903
1900	240906102604	6200	260801062500
2000	200904081602	6300	211205052400
2100	160812071700	6400	990208062002
2200	250411072402	6500	171205071700
2300	241006062500	6600	211006101702
2400	140805082001	6700	130904071903
2500	180406092500	6800	110913102003
2600	141005082400	6900	130205061600
2700	200706051803	7000	111104062500
2800	241005082700	7100	991103082802
2900	130605062500	7200	281014099900
3000	150503102003	7300	110406072308
3100	121099092600	7400	150610081403
3200	201103082300	7500	991099071900
3300	191104091703	7600	260704072400
3400	180707071900	7700	190810071500
3500	150206072800	7800	211104092302
3600	120612069999	7900	181006072402
3700	190702071901	8000	140615052200
3800	999999031602	8100	180105091714
3900	141206111601	8200	140706071603
4000	130612042508	8300	200908061900
4100	140813081802	8400	011007079909
4200	130710091901	8500	141008122407
4300	110605072001	8600	280709081900

APPENDIX H (i)

COMPARISON TABLE 1

Table showing results of comparisons, Questionnaire variables

Comparison	χ^2	df	p	Table number
Selfcare (high) x IIC-ELC	5.261	1	*	5-1
Health concept (high/low) x IIC-ELC	6.352	1	*	5-2
IIC x X-Environment (high/low)	4.000	1	*	5-3
X-Environ/t (high) x IIC-ELC	4.000	1	*	5-3
Consumer x IIC-ELC	4.592	1	*	5-4
Socio-economic status (1-3) x IIC-ELC	3.930	1	*	5-5
IIC x Coincidence (no/yes)	7.529	1	**	5-6
ELC x Coincidence (no/yes)	5.000	1	*	5-6
Salience (2) x IIC-ELC	6.760	1	**	5-7
Selfcare (high) x Own health (better than good/less than good)	26.000	1	***	5-8
Own health (less than good) x Selfcare (high/low)	8.000	1	**	5-8
Selfcare (high) x Discrepancy (no/yes)	14.222	1	***	5-9
Prevent (high/low) x Synergic (high/low)	4.716	1	*	5-10
Age (34 & under/35 & over) x Synergic (high/low)	8.454	1	**	5-11
Self (low) x Salience (1/2/3)	10.423	2	**	5-12
Self (high/low) x Coincidence (no/yes)	6.375	1	*	5-13
Marital (married) x Own health (better than good/good/less than good)	30.559	2	***	5-14
Marital (married) x Discrepancy (no/yes)	16.333	1	***	5-15
Discrepancy (no/yes) x Own health (better than good/less than good)	31.259	1	***	5-16
Salience (1/2/3) x Own health (better than good/less than good)	11.780	2	**	5-17

* $p \leq .05$

** $p \leq .01$

*** $p \leq .001$

APPENDIX H (ii)

COMPARISON TABLE 2

Table showing results of comparisons, Profile variables.

Comparison	χ^2	df	p	Table number
Own health (excellent) x Want health (Work/Fun/XD)	6.262	2	*	5-18
Own health (fair-poor) x Want health (Work/Fun/XD)	5.909	2	<.06	5-18
Want health (Work) x Own health (better than good/good/less than good)	19.899	2	***	5-19
Want health (Fun) x Own health (better than good/good/less than good)	16.800	2	***	5-19
Want health (Work) x Coincid- ence (no/yes)	4.900	1	*	5-20
Want health (Fun) x Coincid- ence (no/yes)	6.533	1	*	5-20
Want health (Fun) x Discrep- ancy (no/yes)	6.230	1	*	5-21
Want health (Work) x Discrep- ancy (no/yes)	4.263	1	*	5-21
Want health (Avoid distress) x Selfcare (high/low)	4.455	1	*	5-22
Describe health (Fun) x ILC-ELC	5.444	1	*	5-23
Describe health (Fun)x Ownhealth	28.625	2	***	5-23a

* $p \leq .05$
 ** $p \leq .01$
 *** $p \leq .001$

APPENDIX I (i)

MINIQ

In your opinion what is the MAIN reason why people want good health ?

To be able to work & look after themselves	For the exhilaration and opportunity it affords	To avoid the distress of being ill
--	---	------------------------------------

Tick ONE box only

In your opinion which of these three statements BEST describes what Health is.

Having a feeling of real wellbeing	Not having anything wrong with you	Feeling 'balanced' enough to work and do things.
------------------------------------	------------------------------------	--

Tick ONE box only

The following is a list of pairs of words, (eg, Following.....Leading).

These are words which might be applied to "HEALTH"

For each pair put a tick (✓) in one of the spaces on the scale to show how close one word of the pair comes in describing Health.

A tick placed in the middle of the scale indicates that neither word in that pair is applicable in describing Health. A word that is 'spot on' for describing Health will have a tick put right beside that word - ie, at one end of the scale.

For example; Say the word to be described was Arithmetic, and the pair of words provided was Easy.....Hard. If you thought Arithmetic was fairly easy you would put your tick here -

Easy 1 _ 1 ✓ 1 _ 1 _ 1 _ 1 _ 1 Hard

Record your first reaction regardless of how unrelated the word HEALTH and the other words appear. There are no right or wrong answers. Work fast. Do not struggle over particular items.

H E A L T H is:

Hot 1 _ 1 _ 1 _ 1 _ 1 _ 1 Cold

Pleasurable 1 _ 1 _ 1 _ 1 _ 1 _ 1 Painful

Good 1 _ 1 _ 1 _ 1 _ 1 _ 1 Bad

Small 1 _ 1 _ 1 _ 1 _ 1 _ 1 Large

BESIDE EACH OF THE STATEMENTS BELOW,
ENTER A TICK IN THE APPROPRIATE PLACE
TO SHOW HOW MUCH YOU AGREE OR DISAGREE.

	Strongly Agree	Agree	Neither Agree nor disagree	Disagree	Strongly Disagree
No matter how hard you try, some people just don't like you.					
Good health is more a matter of luck than what a person does about his health.					
The average citizen can have an influence on government decision-making.					

Indicate by a tick in the appropriate box the extent to which this applies for you.	ALWAYS	MOST TIMES	SOME TIMES	SELDOM	NEVER
I brush my teeth after meals/snacks.					
I eat too much.					
I have a 15 minute walk, (or bicycle ride) outside each day.					
I drive when I have been drinking alcohol.					

How do you rate your own health ?

Excellent	Very Good	Good	Fair to Middling	Fair	Poor	Very Poor
-----------	-----------	------	------------------	------	------	-----------

Tick ONE box only

Which of the following statements are true for you ? TICK ONE BOX ONLY FOR EACH STATEMENT			
	TRUE	NOT TRUE	NOT SURE
1/ I belong to at least one Social or Recreational Organization or Club.			
2/ I have belonged to a health-related group. (Eg, Keep Fit, Weightwatchers, Stop Smoking, Plunket Mothers, etc.)			
3/ I have made a change in my lifestyle in the interests of being more healthy. (Eg, Stopped smoking, started taking more exercise, cut right down on alcohol intake, decided not to bear grudges, adjusted food intake, etc.)			
4/ I have been immunized for at least 2 of the following: Tetanus(Lockjaw), Diphtheria, Whooping Cough, Measles, Smallpox, Poliomyelitis.			
5/ I have been to the dentist within the past 12 months.			
6/ I drink too much alcohol.			
7/ If my Doctor disapproved of Chiropractors I would still go to one if I wanted to.			
8/ I would want to attend a local meeting arranged to discuss some important health matter. (Eg, Faulty sewage disposal, Water fluoridation, etc.)			
9/ I keep a check on my weight. (ie, weigh myself at intervals.)			

If I get sick it is probably because		
I didn't take care of myself and/or part of my body was not working properly	there were germs around and/or there were environmental hazards	I "got" something when I was "run down"
Tick ONE ONLY of the above three options		

APPENDIX I (ii)

MINIQ SCORING CODE

APPENDIX Iii:

MINIQ SCORING CODE

WANT HEALTH	Work	Fun	Avoid Distress	
DESCRIBE HEALTH	Fun	Avoid Distress	Work	

HEALTH
CONCEPT

H E A L T H is:

Hot 1 7 1 6 1 5 1 _ 1 3 1 2 1 1 Cold
Pleasurable 1 7 1 6 1 5 1 _ 1 3 1 2 1 1 Painful
Good 1 7 1 6 1 5 1 _ 1 3 1 2 1 1 Bad
Small 1 1 1 2 1 3 1 _ 1 5 1 6 1 7 Large

TOTAL =

LOCUS OF CONTROL

No matter how hard you try, some people just don't like you.	1	2		4	5
Good health is more a matter of luck than what a person does about his health.	1	2		4	5
The average citizen can have an influence on government decision-making.	5	4		2	1

TOTAL =

OWN HEALTH

Excellent	Very Good	Good	Fair to Middling	Fair	Poor	Very Poor
-----------	-----------	------	------------------	------	------	-----------

MINIQ SCORING CODE

SELF CARE

1	I brush my teeth after meals/snacks.	1	1			
4	I eat too much.				1	1
11	I have a 15 minute walk, (or bicycle ride) outside each day.	1	1			
14	I drive when I have been drinking alcohol.					1
1	I belong to at least one Social or Recreational Organization or Club.			1		
2	I have belonged to a health-related group. (Eg, Keep Fit, Weightwatchers, Stop Smoking, Plunket Mothers, etc.)			1		
3	I have made a change in my lifestyle in the interests of being more healthy. (Eg, Stopped smoking, started taking more exercise, cut right down on alcohol intake, decided not to bear grudges, adjusted food intake, etc.)			1		
4	I have been immunized for at least 2 of the following: Tetanus(Lockjaw), Diphtheria, Whooping Cough, Measles, Smallpox, Poliomyelitis.			1		
5	I have been to the dentist within the past 12 months.			1		
6	I drink too much alcohol				1	
7	If my Doctor disapproved of Chiropractors I would still go to one if I wanted to.			1		
8	I would want to attend a local meeting arranged to discuss some important health matter. (Eg, Faulty sewage disposal, Water fluoridation, etc.)			1		
9	I keep a check on my weight. (ie, weigh myself at intervals.)			1		

TOTAL =

BLAME FOR ILLNESS

I didn't take care of myself and/or part of my body was not working properly	there were germs around and/or there were environmental hazards	I "got" something when I was "run down"
SELF	ENVIRONMENT	SYNERGIC
BLAME FOR ILLNESS VARIABLE =		

APPENDIX J

HEALTH LOCUS OF CONTROL SCALE : WALLSTON et. al., 1976.

Item	Direction*
1. If I take care of myself, I can avoid illness.	I.
2. Whenever I get sick it is because of something I have done or not done.	I.
3. Good health is largely a matter of good fortune.	E.
4. No matter what I do, if I am going to get sick I will get sick.	E.
5. Most people do not realize the extent to which their illnesses are controlled by accidental happenings.	E.
6. I can only do what my Doctor tells me to.	E.
7. There are so many strange diseases around that you can never know how or when you might pick one up.	E.
8. When I feel ill I know it is because I have not been getting the proper exercise or eating right.	I.
9. People who never get sick are just plain lucky.	E.
10. People's ill health results from their own carelessness.	I.
11. I am directly responsible for my health.	I.

- * I = Internally worded
E = Externally worded

The scale is scored in the external direction, with each item scored from 1 (strongly disagree) to 6 (strongly agree) for the externally worded items, and reverse scored for internally worded items.