DEVELOPMENT OF A MEASURE ON QUALITY OF LIFE

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IN
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BY
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UNDER THE SUPERVISION OF
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1996
DEDICATED TO MY LOVING MOTHER for her sacrifice

DEPARTMENT OF PSYCHOLOGY
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# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor's Certificate</td>
<td>...</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>...</td>
</tr>
<tr>
<td>CHAPTER - I INTRODUCTION</td>
<td>1- 19</td>
</tr>
<tr>
<td>CHAPTER -II REVIEW OF RELEVANT STUDIES</td>
<td>20- 87</td>
</tr>
<tr>
<td>CHAPTER -III METHODOLOGY</td>
<td>88- 90</td>
</tr>
<tr>
<td>CHAPTER - IV RESULTS AND DISCUSSION</td>
<td>91-106</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>107-123</td>
</tr>
</tbody>
</table>
Supervisor's Certificate

This is to certify that the M.Phil. dissertation entitled "Development of a measure on quality of life", submitted by Miss Navita Daga for the degree of M.Phil. in Psychology, is her original work and has been carried out under my supervision. The dissertation is suitable for submission to the examiner for evaluation.

( AKBAR HUSAIN )
Reader
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NAVITA DAGA
The concept of quality of life is a global one, which includes not only the physical and economic improvements but also the socio-cultural and political aspects of a community. The various aspects of development that have a bearing on the quality of life (QOL) of a given community could be per capital income, various health care indices such as life expectancy, indices concerning educational levels, communication facilities, transportation, neatness and hygiene, energy availability, etc. Qasim (1993) has given due weightage on the distributive aspect of QOL, which addresses the rural-urban differences in income level, gender differences, regional differences, etc.

The data based on food production and life-expectancy indicate that there is an overall improvement in the QOL of people after Independence. Education, health-care, income, employment, etc. are some of the indices that provide an index for an overall improvement in the QOL of the community. On the other hand problems of illiteracy, infant mortality, homelessness and undernourishment are increasing day by day which of course affects our QOL.
QUALITY OF LIFE: CONCEPT AND DEFINITIONS

It is difficult to trace out when the term QOL is coined and by whom. Szalai (1980) credits to the 9th World Congress of Sociology held at UPPSALA in the year 1978 for coining the term QOL. Since then this term has become popular in public debate, private talk and scholarly discourse.

The term QOL has not yet clearly been defined. It has got different meanings or explanations:

(1) "Quality of life" is not an antonym of "quantity of life". The word quality is understood in given context in its first lexicographic sense i.e., it refers to the more or less 'good' or 'satisfactory' character of people's life. The Concise Oxford dictionary discussed 'quality' in terms of degree of excellence, relative nature or kind or character (e.g., of good, high, poor, etc. quality).

(2) The word 'life' is understood in the context of 'quality of life' of human being only. It is, however, difficult to specify exactly to what aspects or manifestations of human life refers to quality, so called 'everyday life'. The whole course of life or only a certain aspects of it depends on the concrete aim of the given study on QOL and its conceptual and methodological framework.
(3) The term quality of life or briefly, life quality is rarely if ever used in the plural. We may distinguish between high and low quality of life, between the quality of life in this or that country, in this or that social group, but it would require special explanation if somebody spoke in this connection of the 'quality of lives' or the 'the qualities of life'.

(4) Szalai (1980) posits that "the best approach is probably to accept quality of life as a single indivisible generic term and to attribute at first some vaguely circumscribed meaning to it that can be subsequently clarified and specified by more research and reflection".

(5) Literature on quality of life provide evidence that there is no agreement among researches in this field about the exact place that the study of quality of life occupies in related social studies. The current literature on QOL points out that the term QOL overlaps but is not synonymous with a number of other terms, including "social indicators", level of living", and "way of life". Quality of life forms part of a whole family of research concepts which are tried to approach in guiding of human welfare and well-being.

Research in QOL is only more than two decades old. It has spread all over the world and got recognition of
improving the quality of life of people. However, the dimensions or indicators of the QOL are unspecified. Researches are conducted on various aspects of life with the premise that the manifestation of life and the life processes denote an infinite but in a number of fields. Therefore, the QOL is treated as an all inclusive notion of life and living (Szalai, 1980).

The concept of QOL is subjective as its norms vary from one group to another. Quality of life in a society is to a greater extent reflected in the physical and mental well-being of its members which in turn is a function of several different factors in individual's life space (Uma Sekaran, 1983). Wish (1986) noted that people in larger urban areas tend to express their dissatisfaction with QOL, even when it seems to be better by objective standards. However, certain norms are presupposed for the foundation of character and social values which determines the QOL. Wish (1986) conducted a survey of literature on the conceptual definition of 'quality of life'. He quoted Liu (1976) maintaining that there are as many 'quality of life' definitions as there are people. He also pointed out that QOL is a new name for the earlier terms such as "general welfare" and "social well-being". He remarked that two different but often interdependent input categories, viz., the physical inputs and the psychological inputs are associated with the concept of
well-being. Summers (1978) has stated that QOL is a sense of satisfaction or a sense of well-being.

Health-care measures have led to the development of improving the QOL of people. Randal (1981), "health is a social aggregate of individual's tolerance and intolerance for comfort and distress that is bound with values and psychological state". Rice (1984) stated that health often relates to QOL independently of work, housing, air pollution and so forth. Reduced QOL is one of the most important health outcome of illness. Bach (1987) states that fatigue, anxiety and depression seems to be the core symptoms of dysfunctions in QOL. Kaplan (1988) used the term health-related QOL to refer to the impact of health conditions on functions. Williams (1988) emphasizes the importance of measuring QOL as it is essential in understanding the patient. The concept of QOL has been operationally defined as freedom from discomfort, psychological boredom, stress, having satisfaction and happiness pertaining to material, physical, psychological and spiritual aspects.

Studies on psychological well-being have come into dominance in recent years. Well-being is viewed as a harmonious satisfaction of one's desires and goals (Chekola, 1975). In the works of Szalai, "... the whole notion of QOL has been developed social scientist in order
to establish some measures for the well-being of people, for the goodness of their life as they experience it, perceive it, and assess it" (1980, p.19). Mukherjee (1980) defined QOL as, "... a value-laden concept because it refers to attributes that are desirable or undesirable selected out of all the qualitative attributes and their duly quantified indivisibly elements which are involved with or respond to the life process of human beings" (p.189). Levi (1987) defined well-being as a dynamic state of mind characterised by a reasonable amount of harmony between an individual's abilities, needs and expectations, and environmental demands and opportunities. These studies have emphasized the affective aspects of experiences rather than objective indicators (Campbell, 1976; Lehman, 1983; Summers, 1978).

The work on subjective well-being is being carried out under the broad area of QOL. According to Campbell et al. (1970), the QOL is a composite measure of physical, mental and social well-being, happiness and satisfaction involving many life situations, such as health, marriage, family, work, financial situation, educational opportunities, self-esteem, creativity, belongingness and trust in others. The term like subjective well-being, happiness, life satisfaction and QOL are often used interchangeably. The individual is considered to be the best judge of his
situation and state of well-being, and his subjective assessment is considered to be the only valid measurement of well-being. Three salient features of subjective well-being have been envisaged; (a) It is subjective; (b) It includes positive measures; and (c) It includes a global assessment of all aspects of a person's life.

Milbrath (1979) stated that, "subjective studies of QOL typically have shown that most people drive their greatest sense of quality from their home and family life and from the close supportive relationships they have with friends and colleagues". Campbell (1976) also observed that the social setting including interpersonal relations are salient features influencing an individual's level of satisfaction with community. Kratcosky (1981) observed that "quality of life though related in some measure to economic factors, is not totally dependent on them. Active concern for the rights and individuality of others, rather than formal or informal imposition of a set of external standards to them, may be basic to this concept". Cutter (1986) stated that "QOL is broadly defined as an individual's happiness or satisfaction with life and environment including needs and desires, aspirations, life style preferences, and other tangible and intangible factors which determine overall well-being". "When an individual's QOL is aggregated to the community level, the
concept is linked to existing social and environmental conditions, such as economic activity, climate or the quality of cultural institutions". It includes both tangible and intangible measures reflecting consensus on the community's values and goals. Rauch (1990) maintained that, "a proactive environment, integrating our families, religious institutions, centers of education and culture with our community will maintain excellence in our QOL and value systems and allow us to be the very best we can".

Zinam(1989), an economist, attempted to present graphically the components of QOL in their relationship to some crucial aspects of overall development. Six basic areas of development have been identified by him and these are: (a) ecological (dealing with safety of our natural environment), (b) the military (concerned with peace and security), (c) the economic (stressing human material well-being), (d) the social (based on social harmony and justice), (e) the political (dealing with freedom, human rights and dignity), and (f) cultural (based on the preservation and fostering of the development of cultural values) factors. He advocated that all improvements in the QOL should lead to the moral perfection of the individual human being.

A conventional view is that there is a direct positive relationship between QOL and quality of the
person. A higher QOL improves the quality of human in a mutually self reinforcing manner. Deterioration of the QOL inevitably leads to deterioration of the quality of person. Poverty kills the social sentiments in mandistroys, infact, all relations between men. He who is abandoned by all can no longer have any feeling for those who have left him to his fate" (Murphy, 1979). There is also some evidence which suggests that an inverse relationship may also exist. For example, growing affluence and improvement in conventionally accepted dimension of QOL, that is mostly economic well-being, can actually lead to a decline in the moral values of the society. If a person ascends to an ideal state of humanity then optimal QOL is one which will lead to the attainment of this purpose (Rauch, 1990).

Bestuzhev-Lada (1980) has made an attempt to differentiate QOL with other related terms such as "standard of living", "level of living", "style of life", and "way of life". He stated that the concept of QOL is still fairly controversial and ill defined. He commented that different researchers use it in different sense with different connotations. Some authors use objective measures like material comforts and environmental conditions. Some others use subjective aspects such as feeling of well-being in measuring QOL.
INDICATORS OF QUALITY OF LIFE

INTEGRAL INDICATOR

The integral indicator of the QOL seems to be an adequate scientific tool for the assessment of certain developmental trends in our life. There are many different approaches to the comparative analysis of the QOL, but they can be reduced basically to two kinds. First, QOL can be measured for comparative purposes by a fairly comprehensive system of indicators which are supposed to encompass all the main aspects of the concept. Second, quality of life can also be characterized for comparative purposes by the use of one main indicator which is thought to reveal its decisive features.

The first kind of approach has many advantages. It is based on the view that QOL is a rather complex entity. The system of indicators is utilized to take account of all main changes of human activities. The indicator system is usually developed in such a way as to permit its application to all different sectors, classes, age cohorts, social groups and socio-economic strata of the population; and to give a thorough and very detailed picture of the manifestations of the QOL.

Kiuranov (1980) posits that this kind of approach has also some implications and shortcomings. Cognitively,
QOL is actually a complex phenomenon, but such a complex has its own functional tendency which characterizes its essence and determines its qualitative distinction. The use of a large number of indicators may also lead to a merely descriptive, not really analytical, approach to the problem, and to the equalization of the importance of all the different indicators included in a system. Sometimes such indicator systems end up reflecting a "Consumer's attitude" toward QOL.

Kiuranov (1980) said that it is possible to arrive at a notion that is capable of serving as a characteristic of the main, most important and indeed decisive aspect of the QOL. The "pluralistic" approach, which uses a whole set or system of indicators to measure the QOL, resulting in the use of a single integral indicator.

Dreitzel (1974) thinks that the QOL is determined by the quality of the infrastructure. There is no doubt that life is easier in a society where the infrastructure of socioeconomic activity is well developed and of a high standard. Dreitzel's proposal shows that the 'monistic' approach is not by itself a safeguard against a consumer's attitude toward QOL.

UNESCO, OECD and SPES projects analyse different indicator systems to measure QOL and reach to the conclusion that all these indicator systems intend to
reflect essentially what and how much people get from life and the quality of what they are getting. Kiuranov (1980) said that it is much more important to characterize QOL not by what people get from life but rather by what they give to it. He further asserts that if QOL is determined by a single integral indicator, then the quality of work should be acceptable as the basis for such an indicator. After all, the quality of work is a specific and very basic feature of the QOL.

Quality of life is doubly dependent on the quality of work. Quality of life depends on the socioeconomic character of work, particularly on the mode of production. The quality of work is also in a specific way independent from the general character of the socioeconomic system in which the work is done. Kiuranov (1980) believe that the QOL is determined by the quality of work, which may serve as a basic and decisive indicator of life quality. The quality of work depends on the share of creative activity in the working process. The higher this share, the higher the quality of work and, consequently, the quality of life.

The requirements and criteria relevant to an integral indicator of the QOL are different. (1) The indicator should represent a synthesis of the decisive
characteristics of the QOL. (2) The indicator should be generally acceptable. (3) The indicator should be simple and thus easily explicable and comprehensible to respondents of surveys. Finally, it ought to be understood that an 'integral' indicator doesn't have to be an "allpurpose" indicator.

SOCIAL INDICATOR

In Sociological literature terms like 'standard' or 'level' of living, 'style' of life, 'quality' of life, 'way' of life, etc., are used interchangeably which adds to the confusion among researchers. The standard of living represents an evaluation of the degree to which people's material and mental needs (needs for food, clothing, housing, services, educational and recreational goods, etc.) are satisfied, as far as these lend themselves to direct quantitative measurement in monetary or natural units. In principle, some qualitative factors could be included in this evaluation. Sometimes they are incorporated, provided they are closely associated with quantitative factors.

Some used the term "Standard of living" while others used the term "level of living" to express the same concept. Bestuzhev-Lada (1980) suggest that a semantic difference exists between 'standard' and 'level' of
living. The word 'standard' has normative connotations, while the word 'level' is simply descriptive. He utilizes the term 'standard of living' because it has a norm of general welfare in mind.

The term QOL is also fairly controversial and ill-defined because different authors use it in different senses and with different connotations. Bestuzhev-Lada (1980) suggest the 'quality of life' should be understood as an evaluation of gratification which people derive from the degree to which their material and mental needs are actually satisfied. This defies direct quantitative measurement and requires complex methods of indirect quantification.

When we intend to determine QOL, we are interested in measuring QOL of people relating to how many hours people work, how many hours they spend on leisure, how rich and interesting their work is, and how satisfied they are with it. We investigate how comfortable they are at work and in their home life; the quality of their clothing and how fashionable it is, the quality of their food and the conditions under which they take their meals. Quality of the housing, the neighbourhood, and the physical and human environment at large, the functioning of social institutions, the possibilities for communicating with people and engaging in socio-political activities in
creative intellectual and artistic activities, in short everything that fulfills the need for self-preservation, self-development, self-expression and self-realization, self-respect, and respect on the part of others, is part and parcel of the QOL. Bestuzhev-Lada (1980) says that such factors do indeed defy direct quantitative measurements and can be approached only by complex methods of indirect quantification.

The term 'life-style' has been used in a very variable sense by social scientists like Sociologists, Social Geographers, Social Psychologists and also by Belles letters and Journalists to designate in a rather vague sense. Some characteristics of social life that could be grasped only in a more or less subjective and impressionistic way by abstracting from the objective material conditions of people's life activity. Bestuzhev-Lada thinks that a clear-cut socio-psychological concept of 'life-style' should be used for the evaluation of the subjectively determined attitudinal and volitional traits of human behaviour in a given society.

Bestuzhev-Lada proposed a conceptual framework which includes the concept of 'way of life', which comprises, summarizes, and integrates 'standard of living','QOL',and 'life style'. He proposes to interpret 'way of life' as a mode of living, i.e. as a complex
combination of typical criteria of the life activity unfolded by an individual, a social group, or a society as a whole, in so far as this life activity is being conceived in conjunction with its conditions, such as characterized by the standard of living and the QOL. Life-style, as a socio-psychological characteristic, forms an organic part of the way of life.

LIFE-QUALITY INDICATORS

Life-quality indicators have been drawn from a socio-economic literature, or from a social psychology of attitudes and perceptions. Stone (1980) examined some possible indicators borne out from Durkheim's concept of 'organic solidarity' (Durkheim, 1933). Durkheim bridges across to social psychology. He discusses the ways organic solidarity psychologically integrates the individual to society.

Through comparative research, a theory of organic solidarity, proposed by Stone (1980) yields several life quality measures. First, life quality dependence upon a diversity of goods and services, partly measured by a variety of socio-economic indicators. Second, it is a measure of coordination and scheduling, with comparisons allowing for differences in available technology. Third, life quality is a perceived satisfaction with the scheduling process. Fourth, life quality is the psycho-
logical experience of organic integration, and the factors contributing to it. Fifth, life quality is a perceived balance between expressions of organic and mechanical solidarity. Sixth, life quality is a possible relevance to the increasing unpopularity of urban environments. Many of the proposed indexes require a comparative context larger than the individual or household, taking into account features of the society. Stone (1980) suggests that the challenges for comparative QOL programs should make this a sociological approach of high interest.

**OBJECTIVE AND SUBJECTIVE INDICATORS**

Indicators can be divided into two type; those that depend primarily on judgements and/or recordings by someone other than the person whose life-quality is being measured, and those that depend primarily on the direct and immediate experience of the person whose life is being assessed.

The terms 'countable' and 'perceptual' have been proposed as the substitutes for objective and subjective. No terms fully satisfactory to all investigators have been proposed. The problem with the phrase 'objective indicators' is that in many cases these indicators are heavily dependent on someone's judgement and, furthermore, these indicators may also be subject to significant measurement error.
The phrase 'subjective indicator' implies a degree of imprecision and instability which is not applicable to measures that are direct and reasonably valid indicators of people's current perceptions, aspirations, evaluations, or feelings.

There has been a rather sharp division between investigators in the objective and subjective indicators they have tended to prefer and use. The investigators associated with government statistics bureaus and/or using data from such organisations who have tended to focus on the 'objective' indicators, while researchers associated with non-governmental survey organisations have denoted their attention mainly to the more 'subjective' indicators. However, both types of indicators can provide an interesting, potentially useful, and complementary information. Furthermore, exploring the linkages between these two types of indicators, and the ways in which these linkages are similar or different in various cultural settings, has emerged as an important item on the research agenda for comparative studies of life-quality.

SIGNIFICANCE OF THE PRESENT STUDY

The present study is undertaken to develop a scale on QOL for working women. Quality of life has been a subject of research more for other social scientists, economists, educationists, and sociologists than the psycho-
logists. Quality of life includes wider aspects of one's life. A working women usually spend six to eight hours of her daily life at the work environment and the remaining period she spends on her daily life at home. Here our purpose is not only to assess how many hours women work and how many hours they spend on leisure and recreational activities rather than our purpose is to explore how much they are satisfied or dissatisfied with their QOL in the different spheres of life.
CHAPTER - II

REVIEW OF RELEVANT STUDIES

Research in QOL has increased in the recent years. The studies are mainly concerned with the measurement of QOL in diverse samples and in recognition of improving the QOL of people. Quality of life is one of the concept that has gained increasing attention as outcome/dependent variable in physical and mental disorders as well as to the quality of working people's life.

Various attempts have been made to develop measures that provide subjective indicators of well-being (Bradburn 1969; Cantril, 1965). Andrews and Witheys (Reported by Nagpall and Sell, 1985) adopt a thoroughly "subjective" approach: both overall QOL and the factors that may contribute to it are assessed from the point of view of the people whose QOL is being studied. Spilker et al., (1990) presents a comprehensive bibliography of published articles in which QOL instruments are described and or developed. The authors list the QOL literature into three categories:

(1) studies that refer to particular QOL instruments,
(2) quality of life studies that discuss different therapeutic categories, and
(3) quality of life instruments used in specific therapeutic categories.
INDIAN STUDIES ON QOL:

Under this section we have included some of the relevant studies conducted by Indian researchers on QOL.

Mukherjee (1988) examined the properties of objective or subjective variables with reference to a set of mutually distinct but analogous social groups structured at a time point. He commented that a resolution of this issue is vital for the appraisal of a better QOL because by definition it is always an ongoing phenomenon. The issue is examined with reference to its methodological implications and with respect to data on 590 inhabitants of rural and urban areas in India.

Stanley and Roy (1988) examined methods of evaluating the QOL of 7 adults with mental handicaps who were discharged from a hospital to live in a nearby group home. These subjects were compared to 7 patients who remained in the hospital and 7 control subjects from the local community. Traditional measures of QOL such as community participation or management practices did not discriminate between the two patient groups 10 months after discharge of group home subjects from the hospital. To find out significant differences between the groups, social validation and measures such as actual levels of functioning and satisfaction scores were used. This emergence of disparate findings indicated that both subjective and
objective forms of data may be necessary for a comprehensive evaluation of new service developments.

Chaturvedy (1991) interviewed 18 patients who had advanced disease with metastasis, 20 relatives and 12 professionals, to determine the issues they considered as reflecting QOL and how important these items were in the event of a serious illness. Peace of mind, spiritual satisfaction and social satisfaction were considered to be very important by 64% (self-satisfaction), 56% (satisfaction in social aspects), 48% (job satisfaction), and 42% (satisfaction in marital life).

Sahoo and Shwetaleena (1992) studied the subjective components of psychological well-being in terms of the positive and negative dimensions and QOL, using the Brunswik's Lens model of idiographic approach. A total of 25 respondents in each individual groups consisting of doctors, teachers, engineers and administrators were the participants. The results obtained were discussed in relation to professional and social framework.

Yousuf (1993) developed a scale for measuring quality of working life among 73 doctors. This scale consisted of 27 items. Eight factors were obtained on the basis of factor analysis. These factors explained 73% of the variance. The factors included in the scale are:
quality of social and work life, positive affect for job, growth oriented work life, excellence and satisfaction with work, skill based improvement in work life, failure in work life, learning opportunity and good pay, job involvement. These factors were found highly correlated among themselves. The quality of working life scale emerged out to be a good scale and the author has recommended for use in future research.

Sinha (1993) determined how individuals utilize their time after retirement, to make a purposive life with increased well being. She administered Time Structure Questionnaire and Subjective Well-Being Inventory on a sample of 160 retirees. Time structure was found to be positively correlated with well-being. For the various components of time-structure questionnaire the highest correlation was found between well-being scores and effective organization. Time structure and well-being both correlated negatively with age. Results also showed that engagement in activities of some formal/informal organization leads to better structuring of time and well-being.

Rangaswami and Anantharaman (1993) developed a scale to measure QOL of people with epilepsy. Statements pertaining to positive and negative aspects of global well-being and specific problems related to people with
epilepsy were selected in a 5-point rating scale format. The scale comprised 30 items. Reliability, validity and sensitivity of the scale has been established.

Yousuf (1994) constructed a QOL scale for physically handicapped people. The concept of QOL means the well-being of the people. The final format of QOL scale consisted of 197 items. The scale along with some other constructs was administered on a sample of 200 physically handicapped people (congenital=100, acquired=100). The results indicated that a priori clusters were highly correlated among themselves. The scale items were analyzed by factor analysis. Eight factors were derived and named as follows: Expressiveness and creative orientation, harmony in the family, political activism, self-centeredness, recreational activities, family orientation at the cost of health, education and development and planning orientation.

Aminabhavi (1996) assessed QOL of 100 professionals (Doctors, Engineers, Lawyers and Teachers) in relation to their job involvement and socio-cultural background. The obtained results led with following conclusions:

1) Professionals with high job involvement have significantly higher QOL than professionals with low job involvement.
(2) Professionals coming from upper middle stratum of socio-cultural background have significantly higher QOL than that of professionals coming from middle stratum of socio-cultural background.

(3) Quality of life of professionals is not significantly associated with their socio-economic status.

The findings of the study will be useful for the emergence and development of professionals through vocational counselling and guidance.

Yousuf (1996) determined construct validity of QOL scale for physically handicapped people. The results indicate a strong positive relationship between QOL and self-actualisation. A moderately positive association has emerged between achievement motivation and QOL. A highly significant negative relationship was found between QOL and fatalism. Similarly, a weak inverse relation was found between QOL and birth-order. Respondents' age, their profession, political preference were also found having a strong positive association with QOL whereas sex, was highly negatively related with it. The split-half reliability index after correcting for attenuation came out to be .40.
STUDIES ON THE DEVELOPMENT OF QOL MEASURES:

Various attempts have been made to develop QOL questionnaire for various samples. The present section covers the review of literature from 1984 to 1995.

Grieco and Long (1984) examined interrater reliability of the Karnofsky performance status in experiment I. The authors employed Veteran's Administration Medical Center patients; six psychiatric outpatients, alcoholic rehabilitation inpatients, general medical inpatients, nursing home residents and terminally ill patients. In experiment II, inter-rater reliability and concurrent and discriminant validity were studied, using 20 old normals, 20 old outpatients, 20 old pain patients, 20 old dialysis patients and 20 old stroke patients, primarily male. Results show that the Karnofsky performance status was acceptably reliable and valid as a global measure but failed to capture adequately the conceptual domain of QOL.

Evans and others (1985) developed a multidimensional measure of QOL to assess an individual's response to several ecological domains. 12-items scales were derived for each domain. Results showed that the scales had high internal consistency, were free from social desirability and infrequency bias, and had high content
saturation. Scale and item characteristics cross-validated to a sample of 163 volunteers and a concurrent validation study with 107 undergraduates that the scales correlated with the Campbell et al. (1976) measure of QOL.

Lehman et al. (1986) examined the QOL of chronic patients in a state hospital and in community residences. Results show that regardless of length of stay, the community residents perceived their living conditions more favourably, had more financial resources, and were less likely to have been assaulted in the past year than the inpatients. Results illuminate the problematic living conditions of state hospitals and the benefits of appropriately designed community-based residences for the chronic mentally ill.

Callan (1986) studied 42 single women who wanted to be childless, 18 who desired a one-child family, and 42 who wanted two children, responded to questions about the quality of their present lives and nature of future marriages. Results show that on current QOL, there were few differences between groups. Those wanting to be childless, however, rated life as less optimistic, loving and satisfying but life satisfaction was still quite high. These subjects and those wanting only one child wanted to be financially and socially more independent in future relationships than subjects wanting at least two children.
They expected to follow interests and careers to their fullest, wanted more role innovative partners and were somewhat less concerned about home ownership, living on a budget, and contact with family and friends.

Bech (1987) presented a scientific approach to the management concept of QOL in psychosomatic research and contrast this psychometric model with the traditional medical model. Scaling problems of QOL are treated by examining the psychology of boredom and discomfort in relation to psychosomatic symptoms and stressors. The instrumental use of rating scales for measuring QOL focuses on item selection and validity in relation to underlying disorders. Result showed that psychometric model of QOL can be measured by objective methods.

Wiklund et al. (1987) developed a 26-item questionnaire to assess the QOL in severe heart failure, using 51 typical patients, 21 of whom were aged above 70 years. Quality of life was defined as decrease of symptoms, increase of well-being and improved capacity to function in basic daily activities. Results showed with satisfactory reliability and validity. The questionnaire comprised somatic, emotional/cognitive aspects, life satisfaction, and physical limitations.

Milbrath and Doyno (1987) reported that the quality of campus life was generally perceived to be better in the
professional schools than in the core arts and sciences faculties. Librarians had especially low morale and QOL. Monetary and institutional barriers that frustrated faculty members in trying to fulfill their professional obligations to their own high standards were the major factors detracting from QOL (example, lack of secretarial help, little travel money).

Hiner et al. (1987) compared the QOL and health of outcomes of public housing residents living alone with that of 23 residents living with another person. Subjects living alone were predominantly women and had significantly better scores on time use and social interaction domains. On measures of physical health, they were at least as healthy as those living with another person. It is concluded that living alone did not place subjects at additional risk for worst health outcomes or diminished QOL.

Lehman (1988) developed a structured, 45-minute QOL interview for the chronically mentally ill, based on studies with 469 chronically mentally ill patients. Findings indicated that the interview has satisfactory reliability and validity. The author discussed several issues regarding the status of QOL assessments in this population, the potential relevance of such assessments to program development and evaluation, their potential
applications in clinical practice, and persistent problems in interpreting and applying the results of QOL evaluations.

Poff and Michalos (1988) assessed the reliability and the validity of the author's feminism scale among 413 undergraduate women and 431 members of a Canadian organization for the advancement of women. Findings indicate that scale had acceptable levels of reliability as well as criterion related, content, construct and discriminant validity.

Johnston (1988) developed a QOL summary index that provides insight into both direction (favourable or unfavourable) and magnitude of observed year-to-year changes in number of socioeconomic indicators in the US from 1969 to 1985. The information provided by this index lacks explanatory power, but examination of the observed changes in the index yields insight into the relative contribution of changes in different areas of concern to the overall changes observed in the QOL in the US.

Wilson (1988) designed a multi-scale QOL instrument for use in Australian high school students. The internal construct validity and reliability of each of the six subscales across these three contexts was investigated using confirmatory factor analysis procedures. Results indicated that all six of the subscale showed internal
construct validity and acceptable reliability across the three contexts, but that there was some variations in the reliability itself.

Moum (1988) examined the complications that may arise from errors of measurement in self-report QOL scales. The argument that systematic and random errors (mood-of-the-day effects) obscure statistical associations between objective, sociologically relevant, indicators of well-being and self-reported QOL was considered. Analysis of 6 older Norwegians' responses to health questionnaires indicated that response acquiescence (yea-saying) was a source of systematic error that led to underestimated QOL among well-educated subjects and overestimated QOL among older subjects. Self reported QOL appeared particularly vulnerable to mood-of-the-day effect among younger females.

Cheng (1988) contends that the various approaches to conceptualize and measure subjective QOL can often lead to unexpected discrepancies in the results obtained. The different components of subjective QOL (for example, the frequency and intensity of affects) are discussed. It is suggested that the cognitive appraisal of well-being assesses satisfaction with life domains. Psychometric issues concerning this assessment include test-retest reliability, construct validity, subjects' mood, and
social desirability and positive bias. The author posits that life-domains scales were considered most relevant for this type of specific need assessment.

Ciampi et al. (1988) assessed health-related QOL among 95 women with breast cancer. A series of linear analog self-assessment (LASA) scales was used and condensed into four summary scores using factor analysis. Three of these factor scales, incorporating LASA scales related to general health, were designated physical, emotional and social health, the fourth factor scale, termed disease-related, incorporated LASA scales related to breast cancer and its treatment.

Tantom (1988) argues that complex decision rules intervene between the appraisal of impairment in chronically mentally ill persons and the evaluation of their QOL. Factors in the determination of QOL include whether a remedy for the impairment is available, satisfaction with psychological and social function, and subjective weighting of different QOL dimensions. It is suggested that QOL assessment may best be applied in comparisons of the utility of different treatments and in planning the distribution of treatment resources.

Mowry (1988) assessed QOL from 38 deaf and 43 hard-of-hearing adults 3 years 6 months after completing a
vocational rehabilitation program. Subjects had limited financial resources (for example, underpaid, unemployed); however, other objective indicators (for example, health status, living arrangements) of QOL were generally positive. Subjective indicators were very positive regarding subject's life situations; a majority of the subjects reported a satisfied or very satisfied rating on nearly all of the satisfaction items.

Conway and Conway (1988) collected physical fitness data among 430 old Navy men stationed aboard nine ships to study perceived QOL and health-related correlates. Navy subjects reported being less satisfied with their wives or girlfriends and were consistently lower on items addressing satisfaction with work. Navy subjects reported greater satisfaction with themselves and with their ability to adjust to changes. Health-related variables were independently associated with perceived QOL in four life domains (for example, work QOL was associated with higher subjective health rating, being a smoker and lower reporting of psychosomatic symptoms).

Ramund and Stensman (1988) examined whether different groups of 30 ranked functions were correlated to the self-reported QOL and whether there were any difference in the pattern of evaluation between 36 Swedish disabled persons with severely impaired mobility and 36
non-handicapped matched controls. No difference concerning QOL was found between the two groups. Correlations between QOL and six different groups of functions were low in both groups, indicating a mechanism of adapting to a loss of functions. Comparison between the evaluations of the different functions in two groups showed that social abilities were more important to the group with severely impaired mobility, while motor functions were more important to the non-handicapped controls.

Shye (1989) developed a conceptual framework for observing the effectiveness of functioning of action systems and to construct a facet definition of human QOL. The systemic QOL measuring instrument determined reliability and validity. The systemic QOL model is applied to the evaluation of life quality and environmental conditions in a distress neighbourhood within a national urban renewal project.

Spreitzer and Snyder (1989) gathered data through telephone interviews. Focus was on perceived deficits in the quality of one's life as factors that might predispose one toward sports (both active participation and watching sports on T.V.) as compensation. There was no consistent pattern for persons involved in sports to score lower than non-participants as a series of QOL indicators.
Thapa and Rowland (1989) identified factors contributing the QOL by developing a questionnaire based on the QOL Interview and the QOL checklist and administering it to 31 chronic psychiatric patients and 35 staff members. Significant differences were found between the two groups on life domains (for example, leisure, law and safety, health) and an individual items relating to the physical conditions of living and work environments, leisure pursuits, health and physical safety, security, and protection. Staff members stressed motivational and experiential variables; patients stressed the importance of living conditions, relationships and physical health.

Whitaker (1989) examined how QOL has been interpreted in the past in relation to people with a mental handicap and what relevance this has to people with a very profound mental handicap as measured by the Griffiths Mental Development Scale for Testing Babies from birth to two years. Research indicators of positive change and components of QOL for people with a mental handicap were explored. In general terms, the factors that determine QOL for people with a very profound mental handicap were the same ones that determine QOL for people with lesser mental handicaps.

Simpson et al. (1989) investigated QOL of 34 chronically mentally ill patients in acute wards in a
district general hospital, in a hostel ward, and in group homes. Subjects were assessed on measures of QOL, mental state, and behavior. Differences existed between all types of care facility, subjects in group homes and the hostel ward shared more similarities in QOL than those in the district general hospital. Problems of caring for the chronically mentally ill on acute wards were highlighted.

Bergner (1989) contends that interest is increasing in measurement of QOL, health status, and functional status in clinical research. The primary focus of the research is traditional measures of mortality and morbidity. Quality of life is not well conceptualized in medical and health literature. In addition, clinical researchers are searching for a single best measure of QOL. The author has discussed procedure and investigations and gave suggestions that could provide guidance for the development of measure of QOL.

Rubenstein et al. (1989) have discussed the need for determining functional status, QOL and health status in the elderly. Functional status includes physical, mental and social functioning in daily life; QOL includes socio-economic or environmental factors (financial security, availability of food, quality of housing); and health status includes physical, mental and social health.
Goodinson and Singleton (1989) reviewed studies on the difficulties of defining and measuring QOL and the ethical issues raised concerning the use of QOL measurements in allocating treatment resources. Authors have discussed rationales and approaches for measuring QOL, defining QOL, examples of approaches to QOL measurement, coping styles or strategies, depression, placebo effect, type A personality, and adaptation. Criteria were proposed for an adequate QOL test either for use with patients whose treatment is under consideration or for measuring the suitability of a particular patient for any proposed treatment.

Moller and Schlemmer (1989) conducted a study on South African adults in 1982-1983 to develop a reliable cross-cultural index of QOL for South Africa. Sixty objective and subjective indicators confirmed the underprivileged position of Blacks relative to other groups. Results based on factor and regression analysis indicated that the linear additive model of QOL-as-a-whole cannot account for its full complexity. Implications were offered for research to explore single and multiple discrepancies between achievement and various aspects of aspirations and expectations related to life quality.

Parker et al. (1989) examined the usefulness of the QOL index (QLI) in a clinical setting. Significant varia-
tions were found in the QLI scores by type of cancer, all subjects score highest in the support category. The QLI was found to be useful in identifying patterns and areas of need, rather than in making decisions about the care of individual patients.

Mulhern et al. (1989) surveyed historical foundations of QOL in the context of the current need for a developmental measure for clinical pediatric research. The authors stressed that measures that can be applied to the assessment of children with cancer and other chronic and life-threatening diseases are urgently needed. Use of valid QOL scales would facilitate the evaluation of patient status overtime as well as the comparison of results of patients with different diagnosis, treatment histories, and outcomes of therapy. The attributes of an effective QOL measure, based on clinical experience in paediatric oncology settings, include simplicity and brevity as well as conventional psychometric properties.

Stewart et al. (1989) investigated the reliability of the life situation survey in dealing with persons with alcoholism. Findings suggested that the reliability and discriminatory capabilities of the life situation surveys were helpful in alcoholism, and drug-related treatment.

Schalock and others (1989) demonstrated the use of a QOL index in adult clients of a community-based mental
retardation program. The index was developed as both an outcome measure and a criterion of the goodness-of-fit between disabled persons and their environments. Administrative and programmatic uses of such data were highlighted, and cautions to consider when assessing QOL in this population were noted.

Burckhardt et al. (1989) tested reliability and validity of the Flanagan QOL scale in four chronic illness groups; diabetes mellitus, ostomy secondary to colon cancer or colitis, osteoarthritis, or rheumatoid arthritis. Open-ended questions and four instruments, the QOLS, Duke-UNC Wealth Profile, Life Satisfaction Index Form Z, and either the Arthritis Impact Measurement Scale or the Ostomy Adjustment Scale were administered by telephone interview and mailed questionnaires to 134 women and 70 men three times over six weeks. Subjects generated verbal responses that substantiated the content validity of the QOLS. Appropriate validity coefficients indicated both convergent and discriminant construct validity.

Rombaut et al. (1990) investigated the validity of a QOL of insomniacs (QOLI) by assessing its capacity to distinguish between 52 untreated insomniac and 61 non-insomniac patients. Quality of sleep, quality of waking, physical well-being, mood and mental state, and relationships were themes in assessing QOL. The QOLI proved to be
an adequate tool for measuring QOL in insomniacs.

• Bigelow et al. (1990) designed the QOL interview to evaluate the success of mental health service in reducing barriers to meet clients' needs and; helping clients cope with excessive demands, restricted opportunities or impairment of ability. Interviews were conducted with 6 clients with mental disability to quantify interrater reliability of the QOL instrument. Raters agreed on 58-100% of their 36 judgements of each of 146 items, indicating good reliability and good face validity. The QOL interview has characteristics that made it useful for program evaluation.

• Jenkins et al. (1990) have identified major dimensions of health-related QOL by factor analysis. Factor analysis revealed five orthogonal dimensions: low morale, symptoms of illness, neuropsychological function, interpersonal relationships, and economic-employment. Data revealed that health-related QOL is a multidimensional construct and that these dimensions can be measured quantitatively with relatively simple interview and questionnaire techniques.

Ragsdale and Morrow (1990) identified variables related to QOL among 95 persons infected with human immunodeficiency virus (HIV). Subjects completed a
Sickness Impact Profile (SIP) and a Symptom distress Scale (SDS). Most subjects listed acquired immune-deficiency syndrome (AIDS) as their category of diagnosis; 25% were HIV-positive only, and 16% identified AIDS-related complex as their disease classification. Subjects had SIP and SDS scores that indicated HIV infection significantly affected their QOL. Quality of life indicators varied as a function of HIV classification. HIV infection had the greatest disruption in psychosocial aspects of life. The impact of HIV infection was greatest in subjects with AIDS-related complex and least among subjects who were HIV-positive only.

Cattermole (1990) interviewed 8 people with learning difficulties who moved from a hospital and seven people who moved from parental homes to live in staffed homes in the community. Choice, privacy, social life, and relationships with their parents and staff emerged as important factors in participants' perception of their QOL. People with learning difficulties moving to community residences have aspirations that encompass far more than a wish to adapt to life in the community, and their relationships with family and staff are central in achieving such aspirations.

Fabian (1990) reviewed QOL models and findings applied to individuals with long-term mental illness as an
illustration of approaches to QOL methodologies and models. Gap-discrepencies theories were discussed, and life satisfaction and adaptive functioning models of QOL and measurement instruments related to these models were described. Quality of life represents a viable means of investigating the subjective well-being of individuals with chronic mental illness.

Eyles (1990) examined the nature and measurement of environmental quality pointing to tensions between insider and outsider accounts and lay and expert perceptions. Lay accounts were seen as particularly crucial in residential environments, and QOL research into these fields was assessed. Quality of life an environmental quality were seen as closely related phenomena.

Kilbourne (1990) conducted an interview on 2164 individuals in the quality of American life survey of 1971 and for 3692 individuals in the quality of American life survey of 1971. A measure was evaluated based on four items: how well the respondent thinks his or her spouse understands him or her, how well the respondent understands his or her spouse, amount of time spouses spend together in compassionate activities, and reported marital satisfaction. With one correlated error term, these items were found to be a unidimensional indicator and to show substantial invariance across gender, survey year,
and life cycle stage. Inclusion of an item on how much the couple agrees on finances was rejected because this item created invariances by gender and survey year.

Myers (1990) examined the views of 258 patients concerning hospital life in four traditional English psychiatric hospitals by means of a 45-item questionnaire and free-response comments. Subjects' experience of fellow patients, the staff, and the material and institutional aspects of hospital care were explored. Some of the benefits and problems of questionnaire used in this area were discussed.

Ouellette-Kuntz (1990) assessed the intra- and inter-rater reliability of the QOL interview schedule adapted to measure the QOL of developmentally handicapped adults who are unable to complete a written questionnaire or a verbal interview. Ten interviews were conducted with parents and residential counsellors of mentally retarded patients. Quality of life interview schedule was generally acceptable to informants, and the rating scales were sensitive and reliable in terms of intra- and inter-rater agreement.

Chibnall and Tait (1990) developed QOL scale for chronic pain patients. 46 subjects completed the QOL scale a second time, just prior to beginning inpatient treatment for pain. The QOL scale defined QOL as the
degree to which a patient perceived key psychosocial life areas as satisfying or fulfilling. A psychometric analysis of the QOL scale showed it to be internally consistent, highly reliable across time, and representative of a single construct. Preliminary validity investigations determined that a QOL scale shared variance with measure of psychological distress, pain-related disability, and pain description. These correlations were consistent with the definition of the construct.

Lawton et al. (1990) examined the QOL reported by 150 living elderly and matched responses with 200 retrospective estimates obtained from relatives of decedents who had resided in the community much of their last year of life. Most indicators showed declines for the decased over their final year when compared with subjects still alive; 82% of the decedents, however, experienced a majority of "positive quality" months in their last year. Despite a decrement in overall quality, there were no indicators that pointed to an overall negative picture for the majority of subjects over the entire year.

Miller et al. (1990) discussed the effect of respiratory difficulties and the subsequent QOL for 17 patients and 14 mothers. Areas covered included decision-making, health, education, vocational and recreational status, community resources, and life satisfaction. Activity levels
before and after ventilator use were assessed
restrictions in daily life both before and
after ventilator use, QOL was fairly good.

• Blandford and Chappell (1990) examined subjective
well-being among 193 Canadian native and 197 non-native
elderly persons. Subjective well-being was measured as
general satisfaction with life and loneliness, and health
and social factors were the major predictors of QOL.
Independent variables included demographic, health, and
social indicators. Natives had significantly lower life
satisfaction than non-natives. Being Native and
bed-ridden was related to loneliness. The negative effects
of race were evident in relation to loneliness only.

• Muthny et al. (1990) examined complaints, life
satisfaction and vocational rehabilitation in oncology
patients. Results showed that there were some relations­
ships between coping and QOL.

• Woodruff and Convay (1990) assessed the effects of
health behaviors on QOL, as independent from effects of
health status, in 5,082 Navy personnel aged 17-59 years.
Multiple regression analysis showed the health status
variables to correlate significantly with QOL. However, after
controlling for health status, measures of health-behaviors, includ­
ing wellness maintenance for one sample, contributed significantly to
explaining the variance in QOL, which suggests the independent influence of health behaviours on QOL.

Bech (1990) discussed about the measurement and the concept of improvement in QOL in psychosomatic medicine. Quality of life includes more than one dimension namely well-being, side effects of treatment, and psychosocial stressors. The psychometric aspects of these dimensions were analyzed with reference to nomothetic and idiographic methods. For both methods, the clinical improvement index was the most appropriate statistic.

Koch and Muthny (1990) examined QOL in German patients with end-stage renal disease by surveying 761 patients who had received a kidney transplant, 293 hemodialysis patients, and 68 peritoneal dialysis patients. Results confirm the favourable outcome of kidney transplant over the other two treatments in medical and vocational rehabilitation, emotional well-being, complaints and satisfaction with different life areas. All three groups showed different objects of fear but similar levels of fear.

Zweig (1990) identified problems regarding antihypertensive drugs and QOL. Focus was on problems with measuring improvement in QOL in a disease state that is typically asymptomatic, failure of the instruments used to
detect meaningful changes in QOL use of different instruments, and inadequate sample size.

Staats and Partlo (1990) examined whether the perceived Quality of Academic Life Scale (PQALS), would correlate more highly with school satisfaction than with global life satisfaction in 218 university students. Results support the reliability and validity of the PQALS and indicate that PQALS scores were predictive of intent to remain in college for subjects. The PQALS correlated more highly with a measure of school satisfaction than with a measure of general life satisfaction.

Fakunishi (1990) examined the relationship between the QOL and alexithymia in 58 dialysis patients. Hemodialysis patients with diabetic nephropathy had poor QOL in the medical dimension. Although they had good QOL in psychological and social dimensions, a high prevalence of alexithymia associated with self-control ability was observed. Results suggest that their inability to care for themselves was reflected in the poor medical dimension and that good psychological and social dimension were merely an outward appearance. Therefore, identification of alexithymia in dialysis patients is important along with a 3-dimensional evaluation of QOL.

Mulrow et al. (1990) screened 472 elderly male Veterans attending a primary care clinic for hearing loss
and assessed their QOL with a battery of disease-specific and generic measures, including the Hearing Handicap Inventory for the Elderly and the Short Portable Mental Status Questionnaire. Hearing loss was associated with significant emotional, social, and communication dysfunction. Most subjects perceived these dysfunctions as severe handicaps, even though audiologic loss revealed only a mild to moderate impairment. Adverse effects were best detected with disease-specific rather than generic functional status measures.

Skantze and others (1990) investigated the QOL and living conditions of 61 chronic schizophrenic outpatients and 60 university students, using the QOL. Self Report and a semistructured interview dealing with satisfaction and dissatisfaction as reported in the QOL scale. Results indicate that QOL should be evaluated by the person and not by the person's standard of living. The areas of life and living most often reported to be unsatisfactory by schizophrenics were lack of work and activities, dissatisfaction with inner experiences and mental health, lack of contact with others, and complaints of too little money. Many schizophrenic outpatients were found to be low on QOL even with good physical and social standards of living.

Ruffing-Rahal (1991) examined the construct validity of Integration Inventory, measuring qualitative well-being
experience in older persons. Findings indicated moderate
and positive correlations with morale scale and with
spiritual well-being scale, as well as with the four
self-rated well-being measures. Internal consistency was
satisfactory.

Williams et al. (1991) designed views of life scale
to measure perception of well-being in three areas:
inherent value of life, effective life management, and
sense of health. The views of life scale (VOLS) along with
other instruments were administered on 734 subjects.
Reliability assessment yielded strong test-retest stability
and high internal consistency for the VOLS measures.
Relationships between the VOLS and other inventories
provided consistent support for the convergent and
divergent validity of the VOLS. Factor analysis produced
five major quantitative clusters in the VOLS. There was
considerable overlap between these factors and the original
subscales.

Horley and Lavery (1991) presented a longitudinal
investigation of the stability and sensitivity of several
subjective social indicators. Data collected from 93
Canadians, over a 7-year period, indicated moderate
stability for measures of enjoyment, satisfaction, and life
quality. Subjects were further divided into "change" and
"no change" groups on the basis of their self-reported health status. The self anchoring ladder of present life quality was found to be sensitive to change.

* Woodruff and Conway (1991) examined the degree to which changes in QOL are associated with changes in health/fitness factors and health behaviour at one to two year intervals. Multiple regressions showed that changes in QOL were positively associated with changes in health/fitness and health behaviour, with the two predictors accounting for 8% of variance in QOL change at the 1-year interval and 11% at the 2-year interval. Health behaviour change made a unique contribution to QOL change after controlling for changes in health/fitness status at both intervals.

* Hadom and Hays (1991) tested a brief survey designed to concurrently assess Health-Related QOL (HRQOL) and preferences for different HRQOL states. Multitrait-multimethod analysis was used to evaluate the construct validity of the survey in a convenience sample of 116 persons (aged 17-87 years). Two methods were used to assess six aspects of health-related QOL: general health perceptions, meaningful activities, outlook on life, physical suffering, self-care activities, and social relationships. Health-related QOL preferences were assessed using two methods similar to those used for self-reports,
as well as one additional method. The construct validity of self-reported health-related QOL was supported.

Sherman and Schiffman (1991) presented a series of historical reflections on the evolving QOL status of older consumers. It uses a 2-category QOL framework consisting of objective components (example, socioeconomic indicators, health and longevity, housing and family living arrangements, and gender differences) and subjective components (for example life satisfaction and cognitive age) to explore the QOL of older consumers. The strategic reality of diversity in the older market is examined.

Cummins (1991) described the comprehensive QOL scale. Two QOL dimensions (objective vs subjective) are each separated into seven broad domains (material things, physical well-being, productivity, intimacy, safety, place in society, and emotional well-being).

Mc Gee et al. (1991) used judgement analysis with the Schedule for the Evaluation of Individual QOL (SEIQOL) to examine the QOL of 42 healthy adults. Subjects' judgement reliability was high for elicited and provided QOL cues, and subjects' judgement policies accounted for a high percentage of the variance in overall QOL. In study two, 40 patients suffering from gastrointestinal disorders completed the SEIQOL for elicited QOL cues. Judgement reliability was lower than in study one but remained significantly high, and the variance in overall QOL judgements was high.
Cunny and Perri (1991) administered the short-form General Health Survey of the medical outcomes study, a 20-item health-related QOL (HRQL) measure with established reliability and validity, to 35-chronically ill adults (aged 45-84 years). One specific item on the questionnaire can serve as a single-item measure of HRQL. This item correlated positively and significantly with overall score for HRQL.

Kaplan et al. (1991) used the general health policy model to estimate the "well years" of life for men and women. The well-life expectancy integrates standard mortality rates, dysfunction symptoms, relative important weights and progresses. The well-life expectancy was 59.8 years for men and 62.7 years for women. Thus, adjustment for quality of health produced a larger difference for women than men between life expectancy and well-life expectancy. Age-specific estimates of health-related QOL suggests a male advantage before age 45 and a female advantage after age 45.

Rettig et al. (1991) developed a multidimensional scale measure of personal evaluations of family life quality based on resource exchange theory. The scale includes items representing love, status, services, information, goods and money resources received from the family. 592 people experiencing economic stress due to a farm
crisis evaluated the degree to which the receipt of these resources satisfied personal needs for (1) love and affection, (2) respect and esteem, (3) comfort and assistance (4) shared meaning, (5) personal things, and (6) money for personal use. Reliability, correlation, covariance, cluster, and factor analyses provided information for reducing the number of items. A reduced version of the scale was administered to 331 of the same subjects one year later. Data provide evidence of construct validity and reliability for the scale.

Hyland et al. (1991) developed 68-item living with asthma questionnaire to be sensitive to QOL changes in clinical trials. The questionnaire covers 11 domains of life experience, the initial domain and item sets being derived from 6 qualitative focus groups of asthma patients. Psychometric analysis of responses of 101 asthma patients to the initial 101-item set showed the scale to be unidimensional despite being multi-domain, and the finding of unidimensionality was replicated during three further stages of item refinement using 783 patients. Validity of the scale was determined by confirmation of expected group differences, and the retest reliability was high.

Bigelow et al. (1991) examined the internal structure and validity of the 263-item QOL questionnaire, which
was developed to assess the impact of mental health services on clients' QOL. Evidence for the reliability and validity of the questionnaire were presented. The questionnaire discriminates among four known client groups, client and community samples, communities with known QOL differences, and pre-Vs-post treatment samples of clients. The convergence between client's retrospective impressions of improvement and measured pre-post improvement was discussed.

Muoghalu (1991) measured the quality of housing in Nigeria in the areas of structural materials, internal unit facilities provided, and environmental or neighbourhood, internal facilities, and structural materials, in that order. Quality showed a lapse rate from the core to the periphery and from high to low income areas. The quality of city housing detracted from the quality of living.

Lehman et al. (1991) examined the QOL experiences of 469 psychiatrically disabled persons living in a state hospital, large residential care facilities, small group homes, and supervised apartments. A gradient in QOL experiences, based on both the level of restrictiveness and size of facilities, was found to exist in some life areas, such as health and safety, but not in such areas as family relations, numbers of leisure activities, social
relations, and nonviolent victimization. Subjects living in the state hospital reported poorer QOL in comparison to some or all of the community based groups.

Ferrell et al. (1991) presented a four dimensional conceptual model of the relationship between pain and QOL. The four dimensions were:

1. physical well-beings and symptoms,
2. psychological well-being,
3. social well-being, and
4. spiritual well-being.

It was argued that pain was not simply an isolated phenomenon but an experience that influences all dimensions of QOL.

Mass (1991) proposed a model of QOL by combining literature findings and relevant factors of QOL including speech, vocation, and psychosocial rehabilitations and rehabilitation as indication of stress. Two types of problem-solving strategies were distinguished: coping and solving strategies. The importance of these factors was exemplified by interviews. The model was found to be useful in medical decision making and helps patients to think more deliberately about possible complications after laryngectomy.

Mathieson et al. (1991) studied the impact of a laryngectomy on the spouse. 30 laryngectomees and their
spouses were individually given structured interviews focusing on QOL, changes following the operation, and psychological adjustment. Responses from the spouses were analyzed separately, using hierarchical multiple regression analyses to determine the impact of the laryngectomy on the QOL and the psychological state of the spouse. Life-styles variables involving changes in friendships, socializing, and sexual satisfaction contributed differentially to both dependent measures. Separate analyses of the profile of mood states subscales comparing laryngectomees with their spouses indicated that spouses experienced higher levels of depression, tension, and fatigue than their partners.

*Pearlman and Uhlmann (1991) interviewed 258 elderly patients from three health care settings to identify the attributes and events that affect self-assessment of QOL. Subjects rated their QOL as acceptable, citing medical care, health, interpersonal relationships, financial status, and functional status as affecting their QOL. Overall QOL ratings were not strongly associated with objective indicators such as demographic characteristics and use of health care services. Subjective indicators, including patient perceptions of their emotional, socio-economic, intellectual, and physical functioning, were the major determinants of QOL.
Glass (1991) presents a model of Nursing home quality based on staff intervention, physical environment, nutrition/food service, and community relations. These four dimensions go beyond traditional quality of care by including QOL considerations as well. The dimensions were further divided into two subdimensions. For example, the community relations dimension is broken down into the subdivisions of inside-out (for example residents learning the facility for various activities), which is based on supporting associations with friends and family members, and outside-in, in which the facility broadens contacts with the outside community. He advocates that measurable indicators for each of these eight subdimensions can be combined to make an effective and comprehensive quality measure.

Gutheil (1991) reviews for frail older persons and their impact on QOL. Topics discussed include (1) design features of residential settings, (2) planning for sensory deficits, (3) the environment needed to meet basic needs, (4) use of space, and (5) nurturing a meaningful environment. Factors that contribute to resident choice and competence were examined.

Kaplan et al. (1991) evaluated the difference in rating scale methods utilizes in a quality of well-being scale among 53 undergraduates. Subjects were assigned to
one of two groups. Group 1 rated case descriptions using a 0-10 rating scale, and group 2 rated the exact same items using 0-100 point rating scale. Instructions were presented both orally and in writing. Subjects rated 29 case descriptions, each describing the situation of one person on a particular day in his or her life. A sample case description of adults was given. Only one explanation for the difference in the utilities was considered.

Sullivan et al. (1991) examined subjective QOL among 101 mentally ill persons. Living conditions, education, and state and local govt. health and welfare services were investigated. Subjects reported relatively high subjective QOL in the areas of living situation, health, and life in general. Social life and finances were particular concern.

Staats (1991) measured QOL in three time frames; 5 years ago, the present, and 5 years in the future. The relationship variables such as present hope, affect, and stress to QOL was explored, and comparisons were made between theoretical models of QOL. Subjects were 239 persons. Control subjects were interviewed and given questionnaires only. Experimental subjects were interviewed, given questionnaires, and given training in:
increasing happiness and positive activities, (2) goal setting and imagining achievements of goals, or (3) a combination of the first two focuses. Daily uplifts were significantly related to present and future QOL. Training was found to be effective in increasing expected QOL.

McGurie et al. (1991) investigated the QOL experienced by 19 elderly subjects with a developmental disability currently living in two community-based homes after many years in institutions. Quality of life was assessed by the social training achievement record, a survey of number of rooms per home, staff: resident ratio and observation of life in the homes. Results indicate that there was a good QOL in both homes. Differences were found between the two homes with respect to level of functioning.

Burgess and Catalan (1991) addresses the relevance of QOL evaluation to HIV disease. The different ways in which QOL has been defined were discussed, and methodological problems and theoretical approaches to its measurement were considered. The evaluation of health-related QOL is important in HIV infection and should become an integral of future treatment evaluation studies to help clinicians and patients in their decisions concerning available treatment options.
Cleary et al. (1991) developed an instrument to assess the impact of an antiplatelet agent on health-related QOL in patients who had undergone percutaneous transluminal coronary-artery angioplasty (PTCA). The psychometric characteristics were discussed based on baseline telephone interviews with 496 patients, as well as follow-up interviews one month after PTCA. The questionnaire focused on physical well-being, perceived health, emotional well-being, home management, work, recreation and social and sexual functioning. The instrument showed good reliability, moderate validity, and a sensitivity to change in health status.

Ferrans and Powers (1992) examined the psychometric properties of the QOL Index using 349 patients selected from an in-unit hemodialysis patient population. Factor analysis revealed that a 4-factor solution best fit the data, indicating that there were four dimensions underlying the QOL index: health and functioning, socio-economic, psychological/spiritual and family. Construct validity was also established by the contrasted groups approach. Subjects with higher incomes had significantly higher QOL scores on the social and economic subscales. Support for convergent validity was provided. The internal consistency reliability of the overall QOL index and the 4-sub scales were also established.
Faden and Leplege (1992) examined some of the moral implications for clinical practice of the move toward measuring or assessing QOL. They posits that good life or QOL have at least two conceptual preconditions: biological life, minimum cognitive apparatus to attach meaning to life. Quality of life measurement in clinical care has three principle uses: screening, monitoring, and decision-making.

- Sullivan (1992) advocated that the measurements of health-related components including activities of daily living, role functioning, physical and mental symptoms, well-being, and social interaction can be the broad concept of QOL. Some can be adequately assessed by means of established generic measures, whereas others may require additional specific measurements, such as sexuality and disease-specific symptoms and side effects of treatment.

- Bech (1992) assessed health-related QOL including components of health status assessments, such as physical, cognitive, affective, social, economic, and ego or personality-oriented aspects of medical disorders. The medical measurement attempts to identify objective indicators, whereas the QOL measurements identify subjective indicators. The World Health Organization and DSM-III have added validity to the concept of QOL and its assessment.
Frisch et al. (1992) examined the psychometric evaluation of the QOL Inventory (QOLI). Test-retest coefficients for the QOLI range from .80 to .91, and internal consistency coefficients ranged from .77 to .89 across three clinical and three non-clinical samples. Quality of life inventory item-total correlations were found to be adequate, and the QOLI had significantly positive correlations with seven related measures of subjective well-being, including a peer rating and clinical interview measure. Significant negative correlations were obtained between the QOLI and measures of general psychopathology and depression. Clinical and non-clinical criterion groups differed significantly in mean QOLI scores. QOLI norms were presented, and the usefulness of the QOLI for assessing treatment outcome and for psychotherapy treatment planning was discussed.

Leelakulthenit and Day (1992) investigated the level of satisfaction of the Thais with their lives in general and with various aspects/domains of their lives. 496 adults living in the Bangkok metropolitan area were interviewed. Results revealed that Thais were somewhat pleased with their lives in general and tend to be more satisfied with personal domains of life than with environmental domains of life. It was also found that two significant contributors of Thais' QOL were economic well-being and better education.
Van Knippenberg et al. (1992) investigated QOL in 62 patients with esophageal cancer who had a surgical operation (removal of part of the esophagus and part of the stomach). Indicators of QOL were: psychological distress, physical symptoms, global evaluations, activity level, swallowing problems, and food intake. In a psychological sense, QOL improved since patients experienced less distress after surgery.

Roberts and Clifton (1992) developed an instrument for measuring the QOL of university students and reported its validity and reliability. Findings support conceptualizing the QOL of university students in four dimensions including positive affect, interaction with students, interaction with professors, and negative affect. The alpha reliabilities of these scales ranged from .75 to .93.

Hunskaar and Visnes (1992) assessed the QOL of women with urinary incontinence according to age, symptom group, amount of leakage, and duration using the Sickness Impact Profile. 36 women, aged 40-60 years, and 40 women, aged above 70 years, were selected from the clients attending an incontinence clinic. Urge and stress incontinence subgroups were defined by means of a symptom questionnaire. Total, psychosocial, and physical dysfunctions were moderate in general, but major
differences were found when age and symptom groups were analyzed. Urge symptoms were associated with more impairment than symptoms of stress incontinence. The elderly women with symptoms of stress incontinence were relatively little affected, while their younger counterparts were severely affected.

King et al. (1992) examined QOL and perceptions of the consequences of the surgery in 155 individuals before and after they had coronary bypass surgery. One year after surgery, 64 subjects who believed that surgery was worth it because of functional improvement had more positive scores on subjective indicators of life satisfaction and mood than did 62 subjects who believed that surgery was worth it because it saved them from death or 22 subjects who were not sure of the value of the surgery. Findings emphasized the need for using a multidimensional approach to studying the QOL.

Sirkka et al. (1992) investigated the QOL and cognitive performance of patients with extracranial carotid stenosis 8-11 years after treatment in 18 nonoperatively treated subjects and 44 subjects treated with one or two carotid endarterectomies. Cognitive performance was assessed with neuropsychological tests and the QOL by personal interview based on a questionnaire. Most carotid stenosis subjects recovered well both subjectively and
cognitively regardless of type of treatment. Only the subgroup operated on twice was subjectively worse compared with the other groups. Even ten years later the cognitive performance of carotid stenosis subjects was remarkably close to normal.

Rosenberg (1992) said a multidimensional measure of general level of symptomatology may be warranted in modern medicine. The psychometric QOL concept including components such as emotional status, social interaction, economic status, self-perceived health status, and physical capacities pays respect to multi-dimensionality but does not capture the subjectivity of humanity. It is claimed that a model combining naturalism and hermeneutic thinking is needed in QOL research.

Karlsson (1992) suggested the health economist's point of view concerning QOL. In quality-adjusted life years (QALYs), improvements in the length of the life and its quality are amalgamated into a single index. Different types of medical interventions can be compared by calculations of costs per gained QALY. Unsolved problems still remain with QALYs and alternative outcome measures, which were said to take the patient's true preferences into account in a better manner, have been suggested, with scarce resources within the health care sector, measures like QALYs provide a powerful guide in priority settings.
Romney et al. (1992) reanalyzed data collected 6 months after surgery on 469 patients with cardiovascular problems. The data were factor analyzed and five factors were extracted: symptoms of Illness, Neurological Dysfunction, Interpersonal Relationships, Morale or Socio-economic Status. Two competing models were tested against the data using LISREL. In one, symptoms lowered Morale whereas in the other, low Morale aggravated symptoms (i.e., a psychosomatic effect). The first model fit the data very well in contrast to the second model which did not fit the data at all. The authors consider the implications of the first model for improving QOL in cardiac patients.

Dencker (1992) argues that there is increasing interest and an urgent need both in research and in practice to measure QOL factors. In the psychiatric context, the author stresses the importance of using the patient's subjective evaluation of items associated with well-being and not basically contaminated by social factors. The evaluation should be health-related but not primarily concern psychiatric symptoms and signs, items that should be unrelated to the QOL domains. Global ratings with the visual analog scale should preferably be used and the values thus obtained transformed to utilities and practical life situations.

Lehman et al. (1992) examined gender and decade of life effects on the QOL experiences of the chronically
mentally ill. Subjects were administered the QOL interview. Gender and decade of life had more bearing on objective QOL experiences than on life satisfaction. However, the data on life satisfaction suggest a difference in midlife psychological adjustment between chronically mentally ill men and women. Results demonstrated the potential importance of considering gender and life cycle effects on the assessment of QOL among the chronically mentally ill.

Hicks and others (1992) compared the QOL and health-related variables in 35 adult liver transplant patients divided into two groups; one group was assessed at two years or less after transplant and the other at more than two years after transplant. Subjects completed measures of functional impairment, perceived health status, affective moods, and QOL. Both groups reported a high overall QOL and an above-average health status. Long-term transplant patients reported significantly more health-related functional impairment and a tendency toward higher levels of depressed and anxious moods. The high QOL suggests that subjects were coping effectively with the realities of life, despite health-related functional impairment.

Grant and others (1992) assessed the reliability and validity of a QOL instrument developed specifically for allogeneic Bone Marrow Transplant (BMT) survivors. The instrument combined visual analog scale measurements
with demographic and treatment variables and included physical, psychological, social and spiritual QOL domains. Psychometric analysis instruments based on 179 adults indicates that it has a beginning reliability and validity and can be useful in evaluating BMT patient outcome.

Morrow et al. (1992) examined the construct validity and other psychometric properties of the Functional Living Index Cancer (FLIC). 489 patients with histologically confirmed cancer completed the functional living index cancer at the time of their chemotherapy treatment, and demographic and clinical characteristic were abstracted from clinical charts. A 5-factor solution (physical, psychological, and social functioning, current well-being and gastrointestinal symptoms) accounted for 63% of the variance for the original group and 65% of the variance for the cross-validation group. Convergent-discriminant validity was shown with measures of symptoms and anxiety. Most of the expected differences in QOL by demographic and psychological variables were found.

Revicki and others (1992) evaluated the reproducibility, validity, and responsiveness of a health-related QOL battery among 40 adult patients with major depression. The Montgomery-Asberg Depression of Rating Scale (MADRS) served as the measure of depression severity. The health-related QOL battery contained measures of energy and
fatigue, social behavior, cognitive function, home and work role function, and general well-being selected from previously developed and validated instruments. Clinical investigators and nurses as well as patients reported no difficulty in using the battery. The reproductibility and concurrent validity were good. The scales were moderately correlated with MADRS scores.

Stoker et al. (1992) assessed the reliability and validity of the Smithkline Beecham QOL scale in 129 subjects with major depression or generalized anxiety disorder. Subjects were treated with various forms of therapeutic intervention with 72% receiving either an antidepressant or an anxiolytic. Construct validity of the scale was established by administration of the Hamilton's rating scale for depression and anxiety. Concurrent validity was established using the Sickness Impact Profile and the General Health questionnaire. Test retest reliability and internal consistency were high.

Bendtsen and Hornquist (1992) examined the self-assessed QOL in patients with rheumatoid arthritis. 169 women and 53 men self-rated their QOL according to the QOL status and change questionnaire. The greatest impairment concerned somatic complaints, followed by the behavioural/activity index, which also measured satisfaction with functional capacity. The least disturbed spheres
addressed psychological, social and material conditions. There was a consistent impact of rheumatoid arthritis on QOL; however subjects assessed their life situation as "rather good" to "good". There was also a consistent pattern: the better off currently, the less disturbance was perceived from rheumatoid arthritis. Individuals still at work declared less intrusion on QOL with those out of work, and longer duration of rheumatoid arthritis and higher age were associated with poorer QOL status.

Schag et al. (1992) evaluated the psychometric properties of a QOL assessment instrument adapted for HIV patients from a tool previously validated for use with cancer patients. 318 HIV positive subjects self-administered the HIV overview of problems-evaluation system, derived from the Cancer Rehabilitation evaluation system and compared several other instruments relating to QOL. Subject's diagnostic categories included 37% asymptomatic, 20% with ARC, 25% with AIDS, and 18% AIDS with cancer. Psychometric analysis revealed that the structure of HIV overview of problems evaluation system remains similar to cancer rehabilitation evaluation system, inspite of the HIV-related modifications. Internal consistency was high. Asymptomatic subjects were found to have better QOL than the other subjects, consistent with results obtained from the other QOL measures indicating construct validity.
Parkerson et al. (1993) measured health-related QOL among 131 white adult insulin-dependent diabetic patients. These were compared to the Diabetes control and complications. Trial Research Group's Diabetes QOL questionnaire and two generic instruments, the Duke-UNC Health Profile and the General Health Perceptions Questionnaire. The generic measures provided as much or more information about health-related QOL as the disease-specific instrument. Neither the duration of diabetes nor the intensity of insulin therapy had a statistically significant effect on any of the health-related QOL scores. Nondiabetic factors such as comorbidity, marital status, and family arguments were predictors of health-related QOL more often than duration of diabetes, complications, and intensity of insulin therapy.

Delagarza and Erin (1993) examined characteristics related to employment, life-style and QOL of 70 graduates of the Texas school for the Blind and Visually Impaired. High levels of satisfaction, independence, and community integration were reported. Subjects who had some kind of plan for their future reported a significantly higher QOL than did subjects who had no such plan.

Cleary et al. (1993) presents a new set of scales for assessing the symptoms and functioning of persons infected with HIV and reports data on reliability and
validity collected in face-to-face interviews with 189 patients receiving primary care. The scales were easy to administer and reliable and they served as valid measures of QOL. Fatigue, functional status, and the average severity of all symptoms were the best predictors of overall perceived health status. Psychological well-being and perceived health status were the best predictors of overall perceived health status.

WHO quality of life (1993) assessment instrument proved psychometric properties of validity, responsiveness, and reliability, and was found to be sensitive to the cultural setting in which it was applied.

Heyink and Tymstra (1993) advocate that qualitative research has only a modest place within the social sciences. There is a growing awareness that a purely quantitative approach is not always satisfactory, as is the case of research into the QOL. The interview as a research method, the classification, analysis and interpretation of qualitative data, and views on the reliability and validity of qualitative research were discussed. The application and the potential value of qualitative research was illustrated by a study of QOL after a liver transplant.
Lindstrom and Erikson (1993) studied the QOL of children in Denmark, Finland, Iceland, Norway and Sweden. 15,354 families of children aged 2-18 years responded to a questionnaire measuring four life spheres: global (e.g., macro environment, human rights, policies), external (e.g., work, economy, housing), interpersonal (e.g., family, intimate, extended), and personal (e.g., physical, mental, spiritual). Differences between the countries were small. Swedish children ranked slightly higher than the others, with the highest means in terms of both objective and subjective variables. Level of satisfaction was lowest in Iceland, which influenced all QOL spheres.

Holzemer et al. (1993) describes the development and validation of the HIV-Quality Audit Marker (HIV-QAM), an instrument for measuring changes in the status of hospitalized AIDS patients due to nursing care. The HIV-QAM was designed to capture the nurse data collector's judgement of the status of the patient based on observations, interviews, record reviews, and listening to inter-shift report. The final version of the HIV-QAM, which included the scales of self-care, ambulation and psychological distress was administered to 201 AIDS patients. Evidence was found for content and construct validity, convergent and divergent concurrent validity, and for the
internal consistency reliability of the 10 items of the HIV-QAM. The scale also had predictive validity for mortality 3 and 6 months after hospital treatment of pneumocystis carinii pneumonia.

Ringdal and Ringdal (1993) investigated the validity of the 30-item QOL questionnaire for Research and Treatment of Cancer study group (EORTC QLQ-30). EORTC QLQ-30 was administered on 177 cancer patients with heterogeneous diagnoses. Using a nonparametric latent trait model for unidimensional scaling, all EORTC study group scales, except the cognitive functioning scale, were found to be satisfactory. Results strengthen the external validity of the EORTC QOL-30 and confirmed that it may be used on cancer patients with various diagnoses.

Brorsson et al. (1993) presents the Swedish health-related QOL survey with 61 items forming 11 multi-item scales tapping aspects of physical, mental, social, and general health. Analysis evaluated the extent to which the multi-item scales satisfied traditional psychometric criteria. Multi trait scaling analysis provided strong support for item discrimination. Internal consistency reliability coefficient exceeded .80 for 10 of the 11 scales. All scales satisfied the .70 reliability standard for group comparisons.
Cleary et al. (1993) evaluated the performance of the questionnaire designed to assess a broad range of outcomes affected by hip replacement (HR). The questionnaire was designed to be sensitive to the specific symptoms affected by hip arthroplasty. 284 subjects without rheumatoid arthritis who underwent a first unilateral total HR completed the survey 12 month after discharge. The outcome questionnaire included questions about condition-specific symptoms, general health, and functional status. Data on disease severity, comorbidity, and process of care from the subjects' medical records were also obtained. The questionnaire was acceptable to patients, reliable and had good construct validity.

Thunedborg et al. (1993) used the Repertory Grid for measurement of individual QOL in clinical trials. The development and initial validation of the repertory grid for this purpose was the focus of the present study. 33 patients with generalized anxiety disorder participated in a 5-week double-blind placebo-controlled clinical trial of a new beta-adrenergic blocker, a low-dosage neurolaptic, or placebo. At the end of the trial, subjects were interviewed by a clinical psychologist using the repertory grid. The method demonstrated both face and construct validity.
Lydick and Epstein (1993) discusses ways of evaluating QOL measures in terms of patient-clinician interactions and how the clinician can assess the importance of these changes of QOL in terms of treatment and management of disease. Researchers in the QOL area have operationally defined clinical meaningfulness into two broad categories. Distribution-based interpretations are those based on the statistical distributions of the results obtained from a given study. Anchor-based interpretations represent instances where the changes seen in QOL measures were compared, or anchored, to other clinical changes or results.

Corten and Pelc (1994) developed a comprehensive model integrating different sets of variables associated with the concept of QOL. 148 psychiatric outpatients and 40 normal controls from Belgium completed an interview that included measures of subjective satisfaction, fulfillment of needs, and interdependency. Three significant factors for the model were found: the hedonist factor, the achievement factor, and the conformity factor. Items related to needs as defined by Maslow's theory did not recover the satisfaction variables. Thus, subjective QOL can not be derived from objective satisfaction of needs. The abilities and social roles cluster did not position itself along the same axis as the satisfaction cluster.
Kuyken et al. (1994) examined cultural aspects of the health-related QOL construct and discusses the current approaches to crosscultural QOL assessment. Four principle approaches to QOL assessment across cultures are critically examined: (1) developing a new assessment for each setting, (2) adapting/translating an existing measure for each new setting, (3) developing a single assessment through collaboration among researchers representing several very diverse cultures, and (4) using a subjective measure that allows respondents to define the domains relevant to them. The success of these approaches in developing equivalent versions across cultures has not yet been established.

Gill and Feinstein (1994) investigated the "face validity" of what patients and clinicians term QOL, using 75 selected articles evaluated on the basis of several criteria: (1) investigator specific criteria and (2) instrument-specific criteria, both of which involved several subgroups. The measurement of QOL since the 1970s has grown, becoming characterized by time-consuming steps such as item selection, item reduction, pretesting, and quantitative evaluation for reproducibility. However, many measures seemed clinically inappropriate because they lacked face validity.

Aaronson and others (1994) developed an integrated system for assessing QOL in cancer patients. The group
used a modular approach to assess QOL that involves two principal elements: (1) a core questionnaire designed for use across a broad range of cancer patient populations regardless of diagnosis and (2) diagnostic specific and/or treatment-specific questionnaire modules intended to supplement the core instrument.

Cummins et al. (1994) described the development and validation of the comprehensive QOL scale. The comprehensive QOL scale yielded findings to support the validity of the instrument. It is concluded that comprehensive QOL constitutes a unique and comprehensive measure of the QOL construct.

Mc Millan and Mahon (1994) assessed QOL in 68 hospice patients using a newly developed hospice QOL index. The content validity of the Hospice QOL Index and its reliability for use by patients were both supported. Correlations between patient and caregiver scores were extremely weak, suggesting that QOL data collected from someone other than the patient is less than ideal. In an item analysis, relationship with God ranked highest on the total weighted score, the satisfaction score, and the importance score. How sexual the subject felt ranked lowest on both the satisfaction and the importance scores.

Schaafsma and Osoba (1994) determined whether the Karnofsky Performance Status Scale (KPSS) is a reasonable
surrogate measure for patient's QOL and whether the KPSS as an ordinal scale has meaning in terms of QOL. The relationship between the core QOL questionnaire, global QOL, and the ordinal responses to a number of the core questions were explored. There was some correlation between the KPSS scores and item 30 of the QLQ-C30, but as KPSS scores declined from 90 or 100 there was not a steady decrease in QOL, and the negative impact on QOL levelled off at the KPSS score of 60. The weak association between observer rated KPSS and self-rated QOL suggests that these two measures are not assessing the same construct.

Howard and Rockwood (1995) reviewed and independently ranked the measurement properties of QOL instruments since 1980 currently used in anti-dementia drug trials for Alzheimer's disease. Of 36 reports, 5 measured and 4 mentioned QOL, but none employed QOL as a primary outcome measure. Eight instruments, labelled QOL measures, included questionnaires measuring function, self-rating instruments measuring the caregivers' impression of the impact of sickness and deterioration of memory, and observational rating scales measuring function. The most thoroughly tested QOL measure was the Progressive Deterioration Scale and the Italian QOL scale.

Smith et al. (1995) discusses measures of seizure severity as determinants of psychosocial well-being for
patients with refractory epilepsy. The Liverpool Seizure Severity Scale and several QOL scales have become accepted as a standard measure of the efficacy of anti-epileptic drug therapy.

Hermann (1995) discusses the historical trends and directions in the measures, techniques, and procedures that have been used to assess health-related QOL in epilepsy. Health-related QOL in early epilepsy research was driven by a battery approach, using traditional forms of clinical evaluation and available generic measures of cognitive, behavioural, and psychosocial function. During the 2nd phase, more specific concerns and problems (e.g., fear of seizures; social effects; perceived stigma, limitation, and discrimination; behavior ratings; personality; psychosocial seizure; and adjustment) were addressed in the development of specific measures. The measures vary in their coverage sophistication, type, and degree of use. The 3rd phase is characterized by formal assessment of health-related QOL, specifically a generic self-report health status instrument developed by Vickrey and others and an assessment battery developed by Baker.

Corrigan and Buican (1995) assessed the construct validity of subjective QOL for the severely mentally ill. Depression, social adjustment, size of support network, and verbal intelligence were independently associated with QOL.
Verbal IQ was inversely related to QOL, suggesting that those who have more insight into their illness, and thus greater knowledge of their limitations, tend to report diminished QOL. Quality of life was unrelated to psychotic symptoms, suggesting that QOL is not expected to change much with positive or negative symptom reduction. Social rehabilitation is likely to improve QOL by improving interpersonal adjustment and increasing social support.

Langfitt (1995) compared the psychometric characteristics of the Epilepsy Surgery Inventory-55, the Sickness Impact Profile, and the Washington Psychosocial Seizure Inventory. The three QOL measures were administered concurrently to 40 patients with intractable epilepsy and 31 patients who had undergone anterior temporal lobectomy (seizure free) at least 6 months prior. Internal consistency reliability and construct validity analyses was generally adequate across all three measures. Interrater agreement in classifying into QOL domains (face validity) differed significantly across measures. Content validity analyses showed that the measures differed significantly in the range of QOL domains.

Kaplan et al. (1995) evaluated the validity of the Quality of Well-Being Scale by studying 514 HIV-positive men. Quality of well-being scores were significantly lower in the Centers for Disease Control and Prevention Group C
than other groups. The quality of well-being was signifi­
cantly associated with control group lymphocytes, clinician 
ratings of neuropsychological impairment, neurologists'
ratings of dysfunction, and subscales of the Profile of 
Mood States. Baseline quality of well-being scores were 
significant prospective predictors of death over a median 
follow-up time of 30 months.

ISSUES IN MEASUREMENT OF QOL

There are various methodological and procedural 
issues involved with the QOL studies. This section is 
devoted on issues relating to QOL studies.

Taylor (1989) argues that despite increasing 
activity and interest in research, QOL data have made 
little impact in clinical practice with hypertensive 
patients. Progress needs to be made in measuring QOL, in 
incorporating the perspective of the patient, and in under­
standing differences in practice styles among clinicians.

Hume (1989) discusses the ability of available 
psychosocial instruments to provide reliable and valid data 
on QOL issues relevant to managing mild to moderate hyper­
tension. Considerations in the application of QOL data in 
this context include disease state, patient population, 
family involvement in perception of patients' progress, and 
economic conditions in patients' lives. The choice of a
specific antihypertensive medication for given patients may have QOL as well as medical side effects.

Mastekaasa and Kassa (1989) discusses strategies for dealing with measurement error in subjective indicators research to suggest a supplement to the most popular approaches towards the use of multiple indicators and direct measurement of hypothesized sources of error (e.g., social desirability). It is argued that measurement problems, which may be difficult to deal within cross-sectional studies, may be easier to handle under alternate research designs. Ideas from the econometrics literature are applied to subjective well-being data and the question of systematic measurement error in particular.

Mayou (1990) discusses problems with current QOL research in patients with cardiovascular disease and examines measurement issues involving QOL in these patients. The problem with most QOL research is that it ignores the significance of the individual meaning of illness. The role of measures of symptoms, mental state, and functional status for patients with cardiovascular disease was discussed. While research has focussed on QOL in patients with myocardial infarction, very little interest has been expressed in QOL of patients with angina, cardiac failure, pacemakers, or hypertension.
Fava (1990) discusses how the concept of QOL may stimulate a evaluable shift from a merely biochemical approach to a holistic consideration of disease. While measures of QOL have usually concentrated on physical, social, and psychological aspects, and an alternative conceptualization involves focussing on the different stages of the illness process. These stages are the life setting before the disease onset, acute illness, chronic illness and rehabilitation, and the effects of medical treatment. Problems with current biomedical research on the QOL were discussed.

Hanestad (1990) advocates that research often uses self-assessed QOL. Quality of life can not be observed directly; other variables have to serve as its indicators. In the case of self-assessed QOL, the researcher has to rely upon individuals' own statements as to how they feel. The subjective nature of the term creates problems in the matter of the reliability and validity of the data thus collected. Random and systematic errors of measurement are liable to influence the result of the investigations. The researcher must know the possible sources of error and make allowances for them if research into the QOL is to be a worthwhile contribution to understanding what is meant by having a good life.
McCauley and Bremer (1991) reviews psychometric issues relevant to using subjective QOL scales for research with patient populations. The evidence indicates that the scales developed by Bradburn (1969) and by Campbell et al. (1976) assess both affective and cognitive aspects of subjective QOL, that they are measuring something more stable than mood but less enduring than personality, and that they can be as sensitive as physiological measures in distinguishing among treatment groups. These scales offer a useful complement to more objective measures of patient status for research evaluating medical interventions.

Sinnott et al. (1991) examined differences in perceived QOL between two groups of adults with mental retardation. A QOL survey was developed and administered to 10 individuals who were engaged in supported community employment, 10 individuals who were enrolled in a sheltered workshop program, and 9 individuals without disabilities. The latter two groups were matched to the supported employment group on age and gender. The number of leisure activities, use of leisure time, self-esteem, involvement in activities, mobility, job skill perceptions, and perceptions regarding changes in income were positively related to supported community employment.
Jenkins (1992) discusses 11 conceptual and methodological issues relating to health-related QOL. The questions include the following: Why is health outcome research both more necessary and more difficult than it was in earlier decades? What is the definition of QOL? Why is it important to move from judging outcomes to assessing them by a psychometrically acceptable procedure? It is suggested that QOL research is now in the stage of conceptual development, which must be followed by the building of an empirical science. Only then can a restricted library of QOL measurements be developed.

Westman (1992) said that QOL measurements have become important in clinical drug trials together with the traditional outcomes of efficacy and safety. Several problems arise when evaluating such data in the process of licensing a drug or in approving a clinical trial. Instruments for QOL measurements must have sufficient reliability and validity. The sensitivity of the method should have been tested. The interpretation of reported results raises the problem of how one should consider the multitude of subjective experiences and expectations that are important to people's life and cultural relationships. The results of QOL measurements seem to be closely related to the effectiveness or adverse reactions of the treatment. Further research and discussion are needed to evaluate the
contribution of QOL measurements in the process of approving drugs.

Baker (1995) explores QOL issues and measures of QOL in persons with epilepsy. The Liverpool Seizure Severity Scale, which includes previously validated scales, is based on a health-related QOL model for epilepsy. This scale was used to assess treatment effects in a clinical trial of lamotrigine with 81, 15-67 years old epileptics with refractory partial seizures. Subjects reported more mastery or perceived internal control and being significantly happier while receiving lamotrigine rather than a placebo. Subjects who chose to continue lamotrigine reported significantly less anxiety and better self-esteem, mood, mastery, and control over their lives. The health-related QOL model has also been used to examine the effect of epilepsy treatment on QOL in children with severe epilepsy and learning disabilities.
CHAPTER - III

METHODOLOGY

SAMPLE

200 working women representing to four different occupational groups viz., Clerks (N=50), Doctors (N=50), Nurses (N=50), and Teachers (N=50) were drawn from Aligarh city. Clerks were recruited from Registrar's Office of A.M.U., Banks and Telephone Exchange of Aligarh city. Doctors were those who were working in the Govt. hospitals and private hospitals. Teachers were drawn from different schools and colleges of Aligarh city. Nurses were those who were working in the University hospitals and private hospitals. Subjects representing to all the four occupational groups were matched with respect to age. The age range of the subjects was from 25 to 45 years. Income of the doctors and teachers ranged from Rs.5,000/- to Rs.10,000/-. Income of nurses was from Rs.500/- to Rs.2,000/-. Clerks' salary ranged from Rs.2000/- to Rs.4,000/-.

DEVELOPMENT OF THE SCALE

Quality of life scale was developed for assessing various aspects of QOL in four different occupational groups. Originally 72 items were floated and these items were rated by judges who were well-versed in understanding
the concept of QOL. For this purpose 10 judges were recruited and they were asked to assess the face and content validity of the items. Some of the items were modified by them.

The factor analysis was done on data of 200 working women for the QOL scale. The eight factors emerged after the application of Varimax rotation factors are: participation, concern worries, job satisfaction, constraints in work life, societal attitudes, freedom from social interaction, search for better life, satisfaction-dissatisfaction with the social norms. The clear picture of the eight factors with the items contained in each are presented in Table 1 of Chapter IV. Cronbach's coefficient alpha for the QOL scale was found to be .998.

PROCEDURE

The subjects were approached individually and those who wanted to participate to this study were included. Prior to the administration of QOL scales on subjects the investigator established rapport with the subjects and explained the purpose of the present investigation. All subjects filled up QOL scale and personal data sheet. Women's QOL scale (WQOLS) was administered to the subjects individually and instructions were given to them that they have to indicate the degree to which they agree or disagree to each item. They were asked to put a tick mark on any one of the four lines representing to categories of
responses (not at all true, a little true, quite true, completely true) given against each item. Zero to three scores were assigned to "not at all true", "a little true", "quite true", "completely true" categories of responses.

On the basis of personal data sheet age, education, income, occupation, marital status, etc. were ascertained.

DATA ANALYSIS

Data were analysed by means of factor analysis (Varimax rotation factor) and t-test.
CHAPTER - IV

RESULTS AND DISCUSSION

The obtained data was analyzed by means of factor analysis and t-test. The results are presented in the following Tables 1-4.

Table 1.1 Showing Rotated and unrotated Loadings on Factor 1 - Participation.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 1 - Participation</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>Women should be associated with welfare programmes.</td>
<td>.517</td>
<td>.490</td>
</tr>
<tr>
<td>41</td>
<td>My job has given a new meaning to my life.</td>
<td>.430</td>
<td>.543</td>
</tr>
<tr>
<td>58</td>
<td>Women should be encouraged to participate in community affairs.</td>
<td>.603</td>
<td>.495</td>
</tr>
<tr>
<td>59</td>
<td>I feel that working women can maintain pleasant relationships.</td>
<td>.644</td>
<td>.519</td>
</tr>
<tr>
<td>60</td>
<td>I get sufficient affection from my family members.</td>
<td>.580</td>
<td>.414</td>
</tr>
<tr>
<td>61</td>
<td>I consider work as worship.</td>
<td>.697</td>
<td>.581</td>
</tr>
<tr>
<td>62</td>
<td>Devoted workers are not properly compensated.</td>
<td>.330</td>
<td>.300</td>
</tr>
<tr>
<td>63</td>
<td>I am satisfied with the feeling of accomplishment.</td>
<td>.466</td>
<td>.463</td>
</tr>
</tbody>
</table>
### Table 1.2 Showing Rotated and Unrotated Loadings on Factor 2 - Concern Worries.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 2 - Concern Worries</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My superiors assign higher efficiency ratings to male colleagues than me.</td>
<td>.433</td>
<td>.357</td>
</tr>
<tr>
<td>2</td>
<td>The amenities in my house are not according to my status.</td>
<td>.468</td>
<td>.288</td>
</tr>
<tr>
<td>5</td>
<td>My job reinforces family income.</td>
<td>.342</td>
<td>.086</td>
</tr>
<tr>
<td>6</td>
<td>I get depressed on being unsuccessful on the job.</td>
<td>.322</td>
<td>.212</td>
</tr>
<tr>
<td>8</td>
<td>I don't get recognition for the work that I do.</td>
<td>.345</td>
<td>.252</td>
</tr>
<tr>
<td>16</td>
<td>The job hardly provides me the opportunity for recreation.</td>
<td>.533</td>
<td>.332</td>
</tr>
<tr>
<td>21</td>
<td>I feel that my children feel neglected due to my job.</td>
<td>.666</td>
<td>.389</td>
</tr>
<tr>
<td>22</td>
<td>I have financial constraints in running the family expenditure.</td>
<td>.507</td>
<td>.223</td>
</tr>
<tr>
<td>26</td>
<td>I hardly get time to interact with my relatives.</td>
<td>.501</td>
<td>.244</td>
</tr>
<tr>
<td>27</td>
<td>I feel that my family is facing financial hardship.</td>
<td>.616</td>
<td>.362</td>
</tr>
<tr>
<td>31</td>
<td>I am dissatisfaction with my present way of life.</td>
<td>.313</td>
<td>.220</td>
</tr>
</tbody>
</table>
Table 1.3 Showing Rotated and Unrotated loadings on factor 3 - Job Satisfaction.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 3-Job Satisfaction</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>I am satisfied with my career development.</td>
<td>-.517</td>
<td>-.341</td>
</tr>
<tr>
<td>4</td>
<td>I attach more importance to my job than any other job.</td>
<td>-.354</td>
<td>-.251</td>
</tr>
<tr>
<td>12</td>
<td>My family members share the household responsibilities with me.</td>
<td>-.480</td>
<td>-.169</td>
</tr>
<tr>
<td>15</td>
<td>I find opportunities to express my skills and abilities.</td>
<td>-.576</td>
<td>-.382</td>
</tr>
<tr>
<td>18</td>
<td>I am satisfied with my educational achievements.</td>
<td>-.496</td>
<td>-.318</td>
</tr>
<tr>
<td>19</td>
<td>I am satisfied with the wages I am receiving.</td>
<td>-.386</td>
<td>-.260</td>
</tr>
<tr>
<td>32</td>
<td>My job provide me opportunity to give sufficient time to my children.</td>
<td>-.535</td>
<td>-.287</td>
</tr>
<tr>
<td>33</td>
<td>I get ample time for leisure activities.</td>
<td>-.535</td>
<td>-.364</td>
</tr>
</tbody>
</table>
### Table 1.4 Showing Rotated and Unrotated Loadings on Factor 4 - Constraints in Work Life.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 4-Constraints in work life.</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>I realize that my income is low in comparison to that of my colleagues.</td>
<td>-.667</td>
<td>-.427</td>
</tr>
<tr>
<td>36</td>
<td>I believe that I am not keeping good health.</td>
<td>-.544</td>
<td>-.306</td>
</tr>
<tr>
<td>42</td>
<td>I am unable to utilize my talents on the job.</td>
<td>-.585</td>
<td>-.576</td>
</tr>
<tr>
<td>50</td>
<td>I am not satisfied with the working conditions.</td>
<td>-.491</td>
<td>-.382</td>
</tr>
</tbody>
</table>

### Table 1.5 Showing Rotated and Unrotated Loadings on Factor 5- Societal Attitudes.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 5-Societal Attitudes</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>Organisational matters are not discussed with me.</td>
<td>-.418</td>
<td>-.253</td>
</tr>
<tr>
<td>48</td>
<td>Indifferent attitude of my relatives annoy me.</td>
<td>-.562</td>
<td>-.375</td>
</tr>
<tr>
<td>66</td>
<td>There exist many restrictions on roles of women.</td>
<td>-.538</td>
<td>-.413</td>
</tr>
<tr>
<td>70</td>
<td>My family members would be happy if I forego my job.</td>
<td>-.528</td>
<td>-.240</td>
</tr>
</tbody>
</table>
Table 1.6 Showing Rotated and Unrotated loadings on Factor 6 - Freedom from Social Interaction.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 6 - Freedom from Social Interaction</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>67</td>
<td>My family members permit me to attend social functions.</td>
<td>-.554</td>
<td>-.229</td>
</tr>
<tr>
<td>68</td>
<td>Women should be granted freedom of actions.</td>
<td>-.582</td>
<td>-.350</td>
</tr>
<tr>
<td>69</td>
<td>I am satisfied with my friends.</td>
<td>-.559</td>
<td>-.492</td>
</tr>
<tr>
<td>72</td>
<td>I think I am professionally successful.</td>
<td>-.431</td>
<td>-.212</td>
</tr>
</tbody>
</table>

Table 1.7 Showing Rotated and Unrotated loadings on Factor 7 - Search for better life.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 7 - Search for Better Life</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>A working wife can provide better amenities to her family.</td>
<td>.552</td>
<td>.396</td>
</tr>
<tr>
<td>11</td>
<td>I feel tired after doing my work.</td>
<td>.427</td>
<td>.175</td>
</tr>
<tr>
<td>45</td>
<td>I intend to shift from the present locality in which I am living.</td>
<td>-.392</td>
<td>-.242</td>
</tr>
</tbody>
</table>
Table 1.8 Showing Rotated and Unrotated Loadings on Factor 8 - Satisfaction-Dissatisfaction with the Social Norms.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Factor 8-Satisfaction-Dissatisfaction with the Social Norms.</th>
<th>Rotated Loadings</th>
<th>Unrotated Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>I am dissatisfied with the social norms of my community.</td>
<td>-.439</td>
<td>-.323</td>
</tr>
<tr>
<td>14</td>
<td>Women workers are discriminated against men.</td>
<td>-.510</td>
<td>-.296</td>
</tr>
<tr>
<td>17</td>
<td>I feel proud to serve as a leader in organizational setting.</td>
<td>-.350</td>
<td>-.267</td>
</tr>
<tr>
<td>23</td>
<td>Social sanctions against women should be relaxed.</td>
<td>-.470</td>
<td>-.439</td>
</tr>
<tr>
<td>28</td>
<td>I feel happy in giving social support to others.</td>
<td>-.366</td>
<td>-.318</td>
</tr>
<tr>
<td>30</td>
<td>I am not satisfied with the women's right.</td>
<td>-.597</td>
<td>-.480</td>
</tr>
</tbody>
</table>
Table 2 Showing Eigen Values, percentage of variance and cumulative percentage accounted by Factors.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Names</th>
<th>No.of items</th>
<th>Eigen Values</th>
<th>Percentage of Variance</th>
<th>Cumulative percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Participation</td>
<td>8</td>
<td>6.480</td>
<td>23.868</td>
<td>0.090</td>
</tr>
<tr>
<td>2</td>
<td>Concern Worries</td>
<td>11</td>
<td>4.612</td>
<td>16.987</td>
<td>0.154</td>
</tr>
<tr>
<td>3</td>
<td>Job satisfaction</td>
<td>8</td>
<td>3.904</td>
<td>14.379</td>
<td>0.208</td>
</tr>
<tr>
<td>4</td>
<td>Constraints in work life</td>
<td>4</td>
<td>3.129</td>
<td>11.525</td>
<td>0.251</td>
</tr>
<tr>
<td>5</td>
<td>Societal attitudes</td>
<td>4</td>
<td>2.554</td>
<td>9.407</td>
<td>0.287</td>
</tr>
<tr>
<td>6</td>
<td>Freedom from social interaction</td>
<td>4</td>
<td>2.390</td>
<td>8.803</td>
<td>0.320</td>
</tr>
<tr>
<td>7</td>
<td>Search for better life</td>
<td>3</td>
<td>2.064</td>
<td>7.602</td>
<td>0.349</td>
</tr>
<tr>
<td>8</td>
<td>Satisfaction-dissatisfaction with the social norms</td>
<td>6</td>
<td>2.016</td>
<td>7.425</td>
<td>0.377</td>
</tr>
</tbody>
</table>
Table 3 Showing Mean and S.D. Values of different occupational groups on factors of QOL.

<table>
<thead>
<tr>
<th>Factors</th>
<th>CLERKS</th>
<th>DOCTORS</th>
<th>NURSES</th>
<th>TEACHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>1.</td>
<td>50</td>
<td>18.38</td>
<td>3.375</td>
<td>50</td>
</tr>
<tr>
<td>2.</td>
<td>50</td>
<td>15.76</td>
<td>6.23</td>
<td>50</td>
</tr>
<tr>
<td>3.</td>
<td>50</td>
<td>13.54</td>
<td>5.323</td>
<td>50</td>
</tr>
<tr>
<td>4.</td>
<td>50</td>
<td>5.00</td>
<td>3.382</td>
<td>50</td>
</tr>
<tr>
<td>5.</td>
<td>50</td>
<td>6.32</td>
<td>2.101</td>
<td>50</td>
</tr>
<tr>
<td>6.</td>
<td>50</td>
<td>9.8</td>
<td>2.00</td>
<td>50</td>
</tr>
<tr>
<td>7.</td>
<td>50</td>
<td>5.52</td>
<td>1.735</td>
<td>50</td>
</tr>
<tr>
<td>8.</td>
<td>50</td>
<td>10.24</td>
<td>3.19</td>
<td>50</td>
</tr>
</tbody>
</table>
Table 4 Showing Values of t-test.

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clerks/Nurses</td>
<td>1.104</td>
<td>0.585</td>
<td>0.934</td>
<td>0.157</td>
<td>3.06</td>
<td>0.292</td>
<td>0.757</td>
<td>1.045</td>
</tr>
<tr>
<td>Clerks/Teachers</td>
<td>0.341</td>
<td>3.468</td>
<td>1.948</td>
<td>2.211</td>
<td>2.686</td>
<td>0.315</td>
<td>2.628</td>
<td>0.305</td>
</tr>
<tr>
<td>Clerks/Doctors</td>
<td>2.052</td>
<td>4.492</td>
<td>1.362</td>
<td>0.876</td>
<td>3.532</td>
<td>1.719</td>
<td>1.126</td>
<td>0.91</td>
</tr>
<tr>
<td>Nurses/Teachers</td>
<td>0.827</td>
<td>4.403</td>
<td>0.996</td>
<td>2.211</td>
<td>5.22</td>
<td>0.00</td>
<td>1.553</td>
<td>1.303</td>
</tr>
<tr>
<td>Teachers/Doctors</td>
<td>2.52</td>
<td>0.355</td>
<td>3.881</td>
<td>1.601</td>
<td>0.681</td>
<td>1.494</td>
<td>1.452</td>
<td>1.133</td>
</tr>
<tr>
<td>Nurses/Doctors</td>
<td>3.106</td>
<td>5.914</td>
<td>2.519</td>
<td>0.767</td>
<td>6.035</td>
<td>1.39</td>
<td>0.248</td>
<td>0.192</td>
</tr>
</tbody>
</table>
For extracting factor, eigen value was kept at 1.0, i.e., only those factors were extracted which have eigen value of 1.0 or more. Following this procedure, 8 factors were extracted from the 24 factors. These component factors were further rotated to orthogonal rotation. The rotated and unrotated factor loadings are presented in Tables 1.1 to 1.8 respectively.

The discussion of results is based on the orthogonal rotated factor matrix. It is thought appropriate to avoid the interpretation of the unrotated factor matrix for the simple reason that all of them are involved in the process of obtaining the rotated factor matrix in accordance with the criterion of Keiser's Varimax rotation. For the purpose of discussing the results of factor matrix, the factor loadings of .30 or above are considered to be significant. The items who were representing to more than one factors are omitted.

As the results presented in Table 1.1 shows, that the factor 1 namely, 'participation' is very complex factor, consisting of eight items. The highest positive loading is that of the one refers to 'work as worship'. This positive loading indicates an individual who considers work as worship would definitely lead to better her life. Low loading on item number 62 of this factor
indicates that labrious workers do not receive reward. In the light of above discussion, this factor may be named as 'participation'.

Factor 2 namely, 'concern worries' has positive loading on all the items. The values of high and low loadings of item numbers 27 and 31 suggest that the woman works to overcome their family problems.

Factor 3 viz., 'job satisfaction' found to have significant negative factor loadings on all the items. The high and low loading items indicates the extent of job satisfaction among women.

Factor 4 has negative loadings on all the four items. The highest and lowest loading items reflect the attitude of 'constraints in work life'.

Negative loadings on all the items of factor 5 i.e., 'societal attitudes' reflect the existence of negative attitude of the family members and the society.

Negative loadings on all the items of factor 6 i.e., 'freedom from social interaction' are indicative of the existence of social interaction, with an emphasize on social functions, interaction with the friends, freedom of action and success in the job.

Factor 7 i.e., 'search of better life' consists of three items. Of these, two items have positive loadings
and one item has negative loading. Item numbers nine and forty five of this factor reflect the existence of planning orientation; whereas the item number eleven indicates the feeling of fatigue after doing work.

Factor 8 has negative loadings on all the items and refers to existence of 'satisfaction-dissatisfaction with the social norms.'

The percentages of the variance contributed by different factors for rotated factor matrix are presented in Table 2. The first factor contributed a variance of 23.868 of the total variance and has got significant loadings of 'participation'. The second factor contributed a variance of 16.987 of the total variance and 'concern worries' is the significant factor. The third factor contributed a variance of 14.379 of the total variance and has got significant factor loadings on all the items. The fourth factor contributed a variance of 11.525 of the total variance and has got significant loadings on all the items. The fifth factor contributed a variance of 9.407 of the total variance and has got significant factor loadings on all the items. The sixth factor contributed a variance of 8.803 of the total variance and has got significant loadings on all the items. The seventh factor contributed a variance of 7.602 of the total variance and has got significant loadings on all the items. The eighth
factor contributed a variance of 7.425 of the total variance and has got significant loadings on all the items.

Table 3 gives the mean and standard deviation scores of clerks, doctors, nurses, and teachers on eight factors of the quality of life scale.

Table 4 provides information about the comparison between the mean scores of different occupational groups on eight factors of quality of life. The results which are found to be significant are discussed here. The mean value of the clerks is significantly higher than those of the doctors on participation \( (t = 2.052, p<.05) \) factor of QOL. Teachers scoring significantly higher than those of the doctors on participation \( (t=2.52, p<.05) \) factor of QOL. Moreover, the mean value of the nurses is significantly higher than those of doctors on participation \( (t=3.106, p<.01) \) factor of QOL. These findings suggest that clerks, teachers, and nurses as compared to doctors have a stronger feeling of participation for the kind of work that provides more opportunities for the development of their personal capabilities in maintaining relationship and achievement.

On factor 2 of QOL i.e., 'concern worries', clerks scoring significantly higher than those of teachers \( (t=\)
3.468, p<.01) and doctors (t=4.492, p<.01). The mean scores of the nurses are significantly higher than those of teachers (t=4.403, p<.01) and doctors (t=5.914, p<.01) on 'concern worries' factor of QOL. These findings indicate that in clerks and nurses concern worries are of considerably high as part of their QOL. Working women, particularly from lower and middle class families are generally role-overloaded with disproportionate share of household responsibilities. That is why they are worried for raising family income, and satisfaction with life.

The mean scores of doctors are significantly lower than the nurses (t=2.519, p<.05) and teachers (t=3.881, p<.01) on 'job satisfaction' factor of quality of life. Nurses and teachers gave priority to the interest in their work because this reflects a more active attitude toward the working process and tends to give rise to job involvement, educational and career development, and creativity when it reaches a high degree. Doctors do not regard job satisfaction as a criterion of the QOL. Doctors, now a days are more concerned with the earnings rather than exhibiting the feeling of altruism and providing social support.

Clerks and nurses scoring significantly higher than the teachers (t=2.211, p<.05; t=2.21, p<.05) on 'constraints in work life' factor of QOL. Clerks and nurses lives
under the conditions of slavery and oppression, or in freedom they cannot enjoy the fruits of their work. It matters a lot if the working women's salary is low, ill health, or working conditions is poor, which affect the QOL.

On 'societal attitudes' factor of QOL significant differences are found between the mean scores of clerks and nurses (t=3.06, p<.01), clerks and teachers (t= 2.686, p<.01), clerks and doctors (t=3.532, p<.01), nurses and doctors (t=6.035, p<.01). In our society, societal attitudes depends upon the kind of profession, and the socio-economic status of the person concerned. Or, participation in the discussion and roles are determined by the socio-economic status.

Significant differences are not found between the comparison groups on 'freedom from social interaction' factor of QOL (of Table 4). Working women may be clerks, doctors, nurses or teachers; they consider that a repetitive routine is not adequate. Attention is instead given to attending functions, forming friendships etc. The meaningful reciprocities and interaction that take place in the work setting and in functions are likely to enhance women's self-esteem and help in alleviating feeling of inferiority.
Clerks scoring significantly higher than the teachers on 'search for better life' \((t=2.628, \ p<.01)\) factor of QOL. It is interesting to examine the variables related to this factor. In the case of clerks, providing better amenities to the family, schedule of work time, change of locality determines the QOL. Whereas teachers seem to be quite contented with the present life.

All the professional groups of working women exhibit almost similar perception on the 'satisfaction-dissatisfaction with the social norms' factor of QOL. That is, significant differences do not exist between the comparison groups on this factor. In the Indian society, the women suffers the paradox of being found to the social norms and yet fragmented from the society as a whole. Satisfaction-dissatisfaction with the social norms may disrupt the scheduling process in working activities.

This study suggests that not all the women can be expected to equal level of QOL from having paid employment. QOL would depend upon the extent to which each individual's perception of what it means to have a good life. There are many aspects namely, participation, concern worries, job satisfaction, constraints in work life, societal attitudes, freedom from social interaction, search for better life and satisfaction-dissatisfaction with the social norms; that influence, to a greater or lesser extent each individual's degree of satisfaction with life.
REFERENCES


Williams (1988). Do we really have to measure the quality of life. British Journal of Hospital Medicine, 36, 3.


